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FEBRUARY, 1943

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This volume of the Journal includes papers and discussions that were prepared for the program of the thirty-third annual meeting of the American Farm Economic Association that was scheduled to be held December 29, 30, and 31, 1942, at Cleveland, Ohio. The meeting was cancelled but in conformity with past policy of the Association the materials so prepared for presentation at the annual meeting are herein published as a Proceedings issue of the Journal.

THE EDITOR

ERRATA

Volume XIV Number 4 November 1942

P. 785, line 40 should read:
"of 9.5 million dollars. Canada thus managed to maintain its position"
P. 790, line 25 should read:
"mately 2.5 billion bushels represent about three times the normal"

JOURNAL
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Vol. XXV February, 1943 No. 1

AGRICULTURAL PRICE POLICY, JANUARY 1943

JOHN D. BLACK
Harvard University

I SHALL not spend your time belaboring any refinements of economic analysis pertaining to the pricing of agricultural products in war or in peace. It is better to concentrate our attention on the simple issues relevant thereto that are now dividing the country.

In simplest terms, there is but one issue—namely, shall prices of farm products be allowed to rise considerably the coming year, say 25 percent or more? or just a little, say 10 percent or less? Two groups favor the larger increase. One of these consists of economists who think that a reasonable amount of inflation is needed to induce the conversion of production into the lines needed by the war effort. It was recently pretty well expressed by Dr. Merrill K. Bennett of Stanford University in his review of my book *Parity, Parity, Parity.*[1] It was also presented by Dr. F. L. Thomsen at the Agricultural Outlook Conference in November; and in milder form, on the same occasion, by Professor Myers of Cornell University. Some of these certainly would not admit to advocating as much as a 25 percent increase. But the course of action they favor will come nearer to giving us a 25 percent rise than they appreciate.

The other group wanting farm prices to rise considerably during this year includes the producers of farm products who want the prices of their particular product to rise, and their representatives in commodity producer organizations; and also some general farm organization representatives who cannot very well play favorites and therefore have to want prices of nearly all farm products to rise.

Now probably this group favors larger price increases than does

[1] *Journal of American Statistical Association*, December 1942, p. 547.

the professor group, but the two are near enough together in their position so that the professors play very effectively into the hands of the others.

The position of those who favor only a small average increase in the prices of farm products is generally that any increases in real costs must be met by proportionately higher prices; but that increases that are due to the competition for the same land, labor, equipment and supplies, without any significant increases in supply resulting, should be prevented so far as possible. A corollary to this position is that there is so much friction in the transfer of resources from one use to another, even in wartime, that their cost-rates in the desired new uses will rise to undesirably high levels before the transfer is acutally accomplished. Dynamite is effective, it will be remembered, merely because the gases produced cannot escape rapidly enough. The emphasis should therefore be upon direct action designed to secure this allocation rather than upon letting it come about as a result of price inducements that prove needlessly high once the transfer has set in in earnest.

Priorities and Allocations

If any program based upon this second set of ideas is to be successful, obviously some effective machinery is needed for transferring resources to the desired uses. Hence the system of priorities and allocations that has been developed. The theory of priority action was developed in the last war. One can find a good statement of it in Bernard M. Baruch's *American Industry in the War*.[2] The difficulty with it is that the first World War did not last long enough for us to discover how to operate under it. In spite of much bungling, however, much has already been accomplished in this way by means of priorities. A very great transfer of industrial resources has taken place with a relatively small price increase. Mr. Henderson's recent estimate that the war to date would have cost 25 billion more dollars than it has if the prices had been allowed to rise with no more constraint than in the last war, and that consumers would have paid 6 billion dollars more, may not be unreasonable.

Mr. Baruch's full program, we must remember, called for an over-all freeze of both prices and wages right at the start as well as allocations and priorities. The latter would follow along quickly and support the former. With no assignments of raw materials,

[2] A report of the War Industries Board, pp. 21, 27, 387, 394, 470.

employers would have to let their labor go; and it would be in the market looking for the jobs everywhere opening in war industries. But he proposed to allocate labor too. The War Industries Board, with its affiliated War Labor Board and War Labor Policies Board, were just getting ready to try their hands at this when the war ended.

Dr. Richard V. Gilbert of the Office of Price Administration, in presenting the general theory of priorities and price control at the November Agricultural Outlook Conference, freely conceded that labor would have to be rationed between industry and agriculture as well as between industries, if prices of farm products were going to be kept from rising unfortunately. He was also none too optimistic that the Manpower Commission would get around to do this in time to save the situation. He was just hopeful—wistfully so. He also realized that wage rates in industry surely must not be allowed to rise more than would be indicated by the Little Steel Formula—which he estimated to represent about the equivalent of a 5 percent increase across the boards. All he could be was wistful about this too.

It soon became obvious that the Manpower Commission had not moved fast enough, and that industrial wage control was not then going to be very vigorous. Too much water had already gone over the dam. The Administration had been indisposed to restrain wage increases for altogether too long to make any sudden sharp tightening of the reins feasible.

The proponents of a vigorous control of farm price increases have also recognized all along that rationing of scarce food articles was going to be highly necessary. Otherwise the competing demands of the military forces, the lend-lease buyers, and the civilians would create a tight situation and soaring prices. What has happened in the butter market is a good example of this. The sudden foray into the market to obtain lend-lease butter this fall could have no possible effect except to catapult prices upward unless it had been preceded by a program of rationing, or at least allocation to civilian use, that left enough butter in the market to meet the lend-lease demand at a price much in line with that which had been prevailing. About the same thing had happened in the meat market earlier.

If prices of farm products were to be kept from rising "considerably," general food rationing needed to have been begun not long after the sugar rationing. It needed to be extended to meats, dairy

products, canned goods and several other lines. What we are getting now is a hullabaloo about rationing 200 "articles," when in fact all we are getting immediately is rationing of canned and dried fruits and vegetables. Meat and dairy product rationing still seems to be one month away and maybe several. The reasons for this delay, I shall not take time to discuss. They do not add up to sufficient ones.

Of the importance to inflation control of taxation and enforced savings as a means of absorbing the new greatly increased buying power, enough has been said on many occasions already so that no space need be given to it here—other than to this one point, that the enlarged buying power has been in unusual degrees among families of the type which, given more purchasing power, will quickly expand their consumption of products like meat, butter and eggs.

The plain facts of the case are, then, that the conditions necessary to carry out a policy of small increases in prices of farm products, these being limited to meeting necessarily increased real costs, have not existed except in limited measure. The price administrators have been trying to operate upon a basis of bluffing their way through. They have done an amazing job of it; but the bluff does not work well any longer.

The necessary conditions, however, are slowly coming into form. Perhaps in five months, perhaps in ten, they will be enough in evidence so that from then forward our chances of successful execution of a policy of small increases will be much better than now. I am thinking, first, that allocations of manpower and of materials will be better in hand—in particular, that farmers will be reserved the labor which they must have to produce as needed, and also more power and equipment; second, that rationing of foods will be pretty well underway; third, that our taxation and savings program will by then be stepped up to somewhere near the required level. We can also hope that by then the wages of farm labor will have advanced to a normal relation to net farm incomes, so that it will not be so necessary to freeze labor on farms to keep it there as it now seems to be.

If these conditions do develop, then we can look upon the period through which we are just now passing as one of considerable adjustment and readjustment upward to the spiralling forces that have been in operation, but nevertheless a temporary period. At

the end of it, in that case, we will be able to operate successfully a program of small increases. However, the transition from one phase to the other will not be sudden in any event. At the best, we are going to get the necessary conditions only by degrees. All of this is conditional, of course—conditional on whether our people really want prices to be leveled out. If they don't, even these conditions will not check inflation.

Competitive vs. Real Costs

One important part of any such program of tightening up on farm price advances will be the decision as to what price increases are made necessary as a result of rises in *real* costs, and what part of them would be *competitive* if permitted. Following is a classification from this point of view of types of cost increases such as may be caused by the war effort:

I. Types of unmixed higher real costs: Those due to—

A. A decline in crop yields per acre because of—

(a) Lack of usual supply of fertilizers.

(b) Inability to take usual care of crops.

(c) Resort to poorer or less adapted lands.

(These will raise costs whenever the methods made necessary result in a higher-cost combination. At the new prices *now prevailing*, however, they may be more profitable than the old methods. In the sense in which we are concerned with the problem, only if the profit to the farm enterpriser is reduced can we say that the "cost" has risen.)

(A decline of yields any year because of bad weather cannot be called a reason for higher costs—unless one is ready to call the opposite a reason for lower costs. Producers are not willing to do the latter now for last year's crop.)

B. A decline in output per unit of feed input resulting from an attempt to increase total output that is not offset by the higher prices for the product now prevailing.

This may result from feeding dairy cows so far out on the input-output curves as to reduce the net returns; or from feeding hogs to excessive weights; or possibly from forcing laying hens too much. The latter of these two are relatively short-run effects for the most part because it is possible to raise more animals before long.

C. The wearing out of equipment, resulting in heavy repair bills and wasted time and loss of product.

D. Producing the extra product needed with hand or horse labor because power and machines are not available.

E. Having to use less efficient workers who waste the time of others or of the equipment.

II. Types of mixed higher real and competitive costs: Those due to—

A. Higher cost-rates for sprays, fertilizers, fuels, sacks, etc.

(To the farmer these are higher costs if he has to pay for them whatever the reason for it; but the higher prices for them may be in part competitive and in part real—the latter if higher transport costs are involved, or resort to poorer sources of supply, or use of substitutes and the like, or use of poorer labor, etc.)

B. Higher prices for equipment—the same description as for A.

C. Higher wage rates for hired labor—or the same rates for poorer labor.

(These are higher costs to the farmer if he has to pay them whatever the reasons for it. But the higher wage rates represent increases in real costs to the economy as a whole only if the general shortage of labor is causing it to be used less effectively, or poorer labor is being used, or more persons are induced to work by higher wage rates, or costs are involved in moving it from one job to another. Extra pay for overtime, to the extent that it increases labor costs, is partly in a class by itself, and partly competitive.)

D. Higher prices for feeds or seeds produced on other farms.

(These are higher costs to the farmers who have to buy them, but may easily be partly competitive gains to those who sell them; and hence to agriculture as a whole.)

III. Types of pure competitive costs.

A. For the economy as a whole, any increase in wage rates that does not increase the labor supply as a whole.

B. Similarly, any increase in the price of any cost material that does not increase the amount of it produced as a result of overcoming higher real costs.

It should be apparent that to the degree that any costs are competitive, nothing is gained by the economy as a whole by paying them. They merely raise some costs and prices, which in turn raise other costs and prices.

But it is equally true that few costs are completely competitive. For example, some increase in supply often results from a price increase even though competitive costs of the producer goods used

rise proportionately at the same time; and no doubt the total output of the economy as a whole is much stimulated in a period of rising prices, since most enterprisers look more at rising prices than they do at rising costs. Also there may be some lag between the two; not much, however, in a time with everything on the move as during war.

Price Policies

Those who favor a considerable rise in farm prices do so partly because they are much impressed with the importance of the effects just named. They look at the booming enterprise of a period like 1927–29 and say that we need just this sort of thing during the war. They tend to overlook the fact, of course, that the increase in output and in income from getting nearly everybody at work in a war period is all the boom influence we need—in fact, is a bit more than we have yet learned how to keep under rein.

But these groups also don't like having government step in and allocate labor and supplies any more than can be avoided. They prefer to let "economic forces" do the job automatically. They grant that there are limits to this. A small fraction of them would not even have any rationing. "If there are some who won't be able to get any butter, it will be their own fault. They should be more productive and earn more money." But only a few go this far—certainly not many economists with any standing. A considerable group, however, would keep priorities and allocations to a fairly low minimum—and let price and wage increases bring about nearly all of the transfers. They admit that these will produce a considerable inflation; but they call this a "necessary cost" of the war. It is better to pay this cost than lose the war. (I am excerpting Dr. Bennett's review almost verbatim at this point.)

Those in favor of small farm price increases recognize two factors in the situation calling for price increases: First, some bona fide increases in real costs; and second, the impracticability, and for that matter, the impossibility, of a completely adequate system of allocating supplies, labor, etc. Hence they advocate some working compromise involving a moderate amount of wartime "regimentation." Such controls are costly, and vexatious, they admit; but this is better than inflation at the rate of 25 percent or more a year.

If reason were to determine what we will get the 10 percent or the 25 percent or more—it would be the first. But there is a kind of logic on the other side that is very potent—what the cultural

anthropologists call "primitive association logic": the same kind of logic that a Kansas Congresswoman used in her maiden speech, when she said that all women were naturally Republicans, because they were "protective" by instinct and naturally favor protective tariffs. Similarly, a great number of people, especially farmers, want the prices of their products to rise—they have always liked high prices. (With the help of some very able economists they may get what they are itching for.) There is another large group that is equally primitive on the subject of wages. We are likely to have a good deal of this kind of logic in the next Congress.

Our hope is mainly not in the support of any important direct price control by Congress; nor in direct efforts by Mr. Roosevelt and his administrators; but in the indirect effects of programs like allocation of manpower and supplies, rationing of food, and increased taxation, all of which we are being forced to accept for other reasons. It will take some positive price-raising measures to offset the stabilizing effects of these programs. Congress may indeed provide them.

Farm Wages as a Factor

The strongest argument used in support of higher prices in the last several months has been that farm wages have risen to exorbitant levels and that in spite of this the farmers are losing all their helpers. It seems necessary at this point to explore this argument a bit. First to state is that the last available report on the farm labor supply, that for December 1, 1942, showed 9,551,000 workers on farms as compared with 9,428,000 on the same date a year ago.[3] The figures have been running a little higher this year than last ever since May 1.

No doubt this year's farm labor force has not been as experienced as last year's; but it is significant that the men leaving for the wars and the cities, up to December at least, had been replaced so far as numbers are concerned. (These are of course national averages. In some locations, and particularly on some individual farms, the situation was surely acute during the fall, It was these, of course, that we heard about, and that Congress heard about.)

Second—to restate in another way something said earlier—the agriculture of the nation will not get all the help it needs this com-

[3] U.S.D.A. Farm Labor Report, December 14, 1942. For hired labor, the 1941 and 1942 figures have run neck-and-neck through the year, averaging 2,352,000 in both years.

ing year in order to produce the food we must have, merely by raising wages. It would not get this help even if wages were made more than equal to those paid for these same types of workers in the cities. Unless other measures are taken, farmers and their helpers will keep on joining the armed forces and going into war industries. It looks as if these measures are at least in process of being planned.

Third—Higher farm wages will nevertheless help significantly with the farm labor supply. Not only will they help to retain laborers, but they will attract new ones, especially for the temporary jobs.

Fourth—Farm wages are still not as high as they should be. Chart 1 plots three things: A, relatives of the net return by years to farm enterprisers and their farm laborers; B, relatives of the payments to hired labor, including an estimate of the value of perrequisites; and C, relatives of the ratios of B to A. The base period for all three is 1910–14. The reader may, however, be disturbed by the possibility that the quantity of hired labor may have changed relatively, especially in the 30's. In Chart II, the three series have been reduced to a per-head basis, A, by dividing the A's of Chart I by the number of workers on farms each year; B by dividing B of Chart I by the number of hired farm laborers of that year, and C, by again taking the ratio of B to A.[4]

The series in the two charts run closely together. On a per-head basis, the returns to hired labor in the 20's were a little lower than on an aggregate basis, but the tables were reversed slightly in 1932–36. The relatives of the A/B ratios have been almost identical since 1938.

The points to be observed in these charts are as follows:

1. In boom times like 1917–19, and 1940–42, farm labor's share of the income of agriculture has declined sharply; and the reverse of this in the years of depression onset, like 1921 and 1930–32. These effects are very short-lived. Contracting for labor at the beginning of the season and having prices change later explains part of this phenomenon.

2. Except at these times, the share of the income to manage-

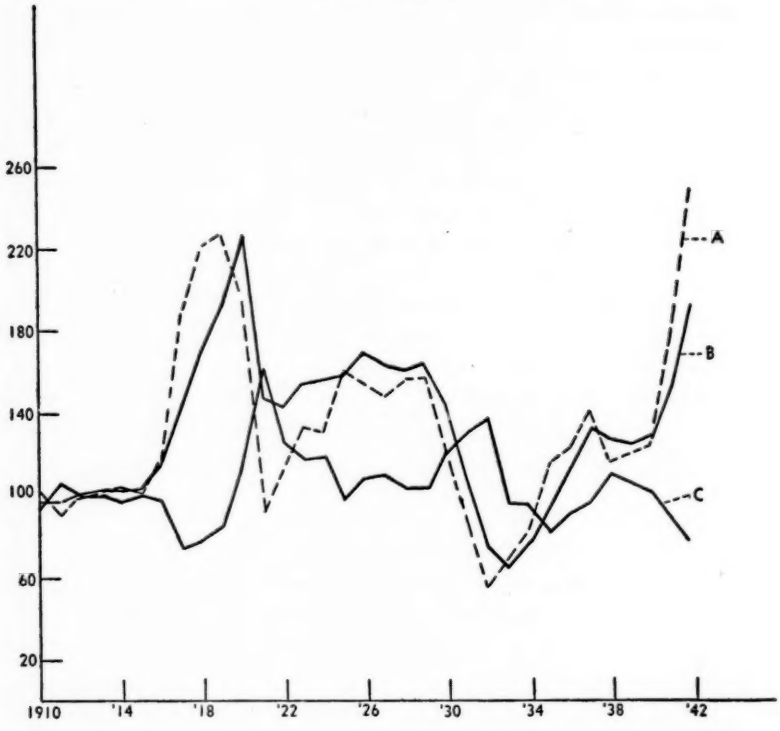
[4] Using the series published in Backgrounds of the War Farm Labor Problem, p. 21; and since then the figures published in the Farm Labor Report of the Department of Agriculture. A similar series can be obtained by dividing by the number of farms each year. The two run very closely together if the census count of number of farms is adjusted for its abnormalities in 1930 and 1935.

ment and labor that goes to hired labor has remained very close to its 1910–14 level. This means that except in years of sudden change in farm incomes, hired labor has shared in the total agricultural income in a pretty stable manner.

3. In 1916–1920, the share going to hired labor lagged two years. It has lagged very similarly since 1940.

4. Farmers can therefore afford to pay somewhat higher wages than they paid in 1942. However, they may already be paying them

CHART I. Relatives of: A, Net Farm Income to Management and Labor; B, Payments to Hired Labor; C, Ratios of B to A. (1910–14=100)

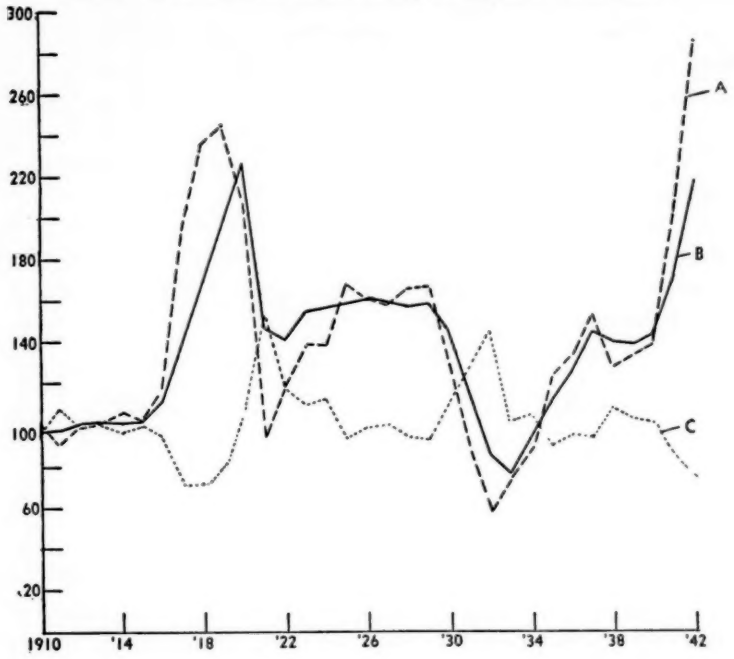


in many sections of the country. Wages have been rising rapidly in the past six months, and many of the contracts for 1943 now being made may be on a basis that establishes the "normal" relation.

5. There is nothing in what has happened up to 1942 that furnishes any real basis for an argument for including wage rates in

parity. Wage rates needed to rise, and farm incomes have been large enough thus far to cover such rises. But in 1943 and 1944 this may not be the case. One would surmise that if farm incomes keep on rising strongly, as they give every prospect of doing, payments

CHART II. The Same as Chart I Except Computed Per Worker.



to labor will not altogether catch up in 1943, but they will in 1944. The inclusion of wages in the parity formula is more important for the future, therefore, than it has been in the last two years.

Meaning of "Normal"

It is proper to inquire what "normal" means in such a connection. Does the fact that a certain relationship between returns to farm operators and to hired farm labor has maintained from 1910–14 to 1940, except for years of wars and depressions, mean that it is the right one, and must continue for the future? The writer strongly suspects that it will not maintain after this war is over. The returns to hired labor have been at too low a figure for good health and social morale, and the war has introduced factors into the situation

that make a change possible—such factors as the increasing mobility of farm labor and the prospect of a burst of mechanization of agricultural production at the end of the war. It is to be doubted, for example, if wages under a dollar a day will return to the South. One may ask: What will the poor employer do for an income? The answer is of course that he will adjust his farm business to a basis that requires less labor and enables him to pay better for what he hires. Those who cannot make this adjustment will have to live out their days on their farms as best they can—as they have always had to do. But it is to be hoped that most of them can be helped to make the needed adjustments. We now have credit agencies for just such a purpose.

The analysis above is also all in terms of percentage of changes. Usually we need to look at absolute figures too. In dollars, the returns per head to management and labor[5] and to hired labor have been as follows in recent years.

	Management and Labor	Hired Labor
1935–39	$510	$360
1940	535	390
1941	765	470
1942	1090	595

Thus to the one has come a gain of $580, and to the other, a gain of only $235. One may conceivably ask, Would not the agricultural population as a whole have been in better shape if, say, the gain to management and labor had been only $525, making possible a gain of $400 for the hired labor group,[6] even though this would raise the percentages well above any past normals?

Price Bases

Relative to the current drive to get wages of farm labor included in the computation of parity, on a basis that will include both proprietor and unpaid family labor in the weights, no reasonable objection can be offered provided parity is computed on a basis that fits the different products and sections of the country. As computed and applied now, it puts the ceiling limit on some products so far out-of-line upward from the others that the inclusion of farm labor

[5] To proprietor plus unpaid family labor, plus hired labor.

[6] The number of hired laborers is about one-third the number of proprietors plus family laborers.

on the basis proposed would make a preposterous ceiling price structure.

No workable general over-all formula for computing parity can of course be devised. So far as the price side of such a formula is concerned, not only will one common historic price base not fit all, but some provision needs to be made for difference in trends in physical volume per farm and per worker. But the most serious weaknesses are on the cost side. Different products use greatly varying proportions of labor, of feed, of fertilizer, etc. Consider, for example, using a common parity formula for cotton, for northeastern poultry and for California dairying! The ideal solution in terms of parities is of course in terms of net incomes on a farm-unit basis rather than of prices and cost-rates. But this may very well be altogether too rational for the politically minded. A possible halfway parity basis may be one on an individual commodity basis and including prices and cost-rates only. A good commodity to start with would be eggs.

Others would like to see the parity basis abandoned altogether. The writer is of the opinion that this would be the best solution for the present. It may happen. Several things could develop in the next year or two that would bring this to pass. But we cannot count upon it; and it would be an abandonment that would last only until the next agricultural depression came.

Also if parity was to be scrapped now, we would still be in need of some kind of a price basis. In setting up the support prices for the 1943 program, the Department of Agriculture was in a highly fortunate position. It could set them all above parity as it was then being figured, and at some figure which it thought would cover necessary cost increases, and which also was generally acceptable to the producers. It could say to the producers: "See, we have given you parity prices or more." Parity has thus served as an excellent shield or screen. The Department may not be in this fortunate position again soon.

If the parity basis is abandoned, it surely will not be. Producers will then very boldly state the prices which they think are "necessary" to cover their costs. And they will think them good and high. The labor unions have long asked for much more than they expect to get. But they have become conditioned to not getting all of it. Our agricultural producers have not yet been so conditioned. They will honestly believe the cost figures that are fabricated for them.

Recently in a midwestern state one group of farmers, mainly in one farm organization, reported necessary prices for hogs at a dollar or two higher than the farmers in another organization. The second group really needs the high prices more than the first. But it has a different political background.

The economic approach to the problem of setting such prices is clear enough. It was outlined earlier under the head of "competitive vs. real costs." Once a decision has been made as to how much of any product is wanted, one can proceed to determine what "resources" need to be devoted to their production, and where these can best be obtained. Especially if an increase in output is needed, an attempt then needs to be made to estimate what *real* costs are involved in the required transfers. If the same approach is used for all competing products, then no competitive costs need to be figured in. But of course it is hopeless to expect such a consummation clear across the boards, especially in industries competing for the same labor. There are also psychological aspects of the problem that cannot wholly be overlooked. The final determination will therefore involve more than economic analysis.

DISCUSSION BY GEOFFREY SHEPHERD

Iowa State College

Dr. Black believes that "There is but one issue—namely, shall prices of farm products be allowed to rise considerably the coming year, say 25 percent or more? or just a little, say 10 percent or less?" Dr. Black favors the latter course—a small rise of 10 percent or less. But, he says, we are still in the adjustment period, and the conditions necessary for a small price rise—allocations of manpower and materials, rationing, taxation, savings, farm wages up more nearly in line with net farm incomes—are not here yet. He believes, however, that they are coming. Perhaps in 5 or 10 months they will be here, and we will then be able to follow a policy of only small price increases.

Perhaps that is the political issue, and the current scrap in Congress about including farm wages in the parity formula is one of its expressions. But it seems to me that it is not the economic issue that we as economists should be primarily concerned about. The real economic issue, I believe, is not whether the prices of farm products should be allowed to rise much or little, but rather, which prices should be allowed to rise, and how much in each case, and which ones should be held constant, or reduced. This is the more true this year, where questions of manpower, allocations of machinery, etc. are becoming more important than prices. But in any case, in "an" industry as diverse as agriculture, the economic issues relate to particular products, and differ from product to product.

This diversity is evident even in the political settlements that have

been made. Parity is ostensibly the goal for all products, but the loan rates for corn and wheat are set at 85 percent of parity; for the other basic products, at 90 percent; the price floors for non-basic products are to be not less than 90 percent of parity, and are to be instituted only when necessary to encourage the expansion of production of a commodity; the hog price floor is $13.25 at Chicago, not any particular percentage of parity, and so on.

It seems to me that the price issues we should be clarifying and coming into agreement upon, as much as possible, are the same kind of issues that are handled in the preparation of the annual physical production goals. In that preparation, we do not decide whether we should produce more or less farm products. We decide that we should produce more corn but less oats; more flax, but less wheat; more pork, but no more milk, and so on. Only one remaining step now needs to be taken, and a rational procedure for controlling agricultural production will have been worked out. That step is to determine the prices, subsidies, credit conditions, contractural arrangements, labor supply, etc., necessary to induce the required production of *each particular product.*

Because price policy is the subject of Dr. Black's paper, and for brevity in any case, attention will be focussed here on the price part of this step. "The" economic issue then boils down to this: Do we need higher prices, constant prices, or lower prices for each product considered separately; and if higher or lower prices are required, how much higher or lower? I believe that it would be possible for competent economists to come to substantial agreement on these questions. The United States Department of Agriculture could then publish, along with its annual list of physical production goals for the different farm products, a corresponding list in an adjacent column showing the prices that, along with the other kinds of inducements mentioned above, would in their opinion result in the production of the desired amount of each product.

This would merely formalize what is already being done informally. The existing price floors that are above parity—$13.25 for hogs, $1.60 for soybeans (the 1943 figure, which probably should be higher, is not yet out) etc.—already constitute part of this price list. While the demand for most farm products is so strong, most of these "necessary" prices (to use the term that Dr. Black offers in another context) are above the percentages of parity established by law. A considerable part of this price list can already be written in alongside the production goals. I suspect that it would not be difficult then to get agreement among economists about the rest of the list. For example, the price of wheat that would do the job would be lower than $1.16 (85 percent of parity) and lower even than the open market United States farm price of $104.4 for November, 1942. I will leave each reader to set his own price in cents per bushel as a mental exercise; I suspect that the range among us would not be great, and that it would be narrowed to a small figure if we got together and pooled the reasons for our different opinions.

The publication of this list of prices would put those who were pressing

for higher or lower prices on the defensive, and focus attention on the economic rather than the political issues in the situation. It would not resolve the political issues, but it would crystallize the economists' position and set up economic benchmarks in specific quantitative terms.

DISCUSSION BY HOLBROOK WORKING

Stanford University

Professor Black in his paper has stated a point of view and a line of reasoning that seems to me completely sound and extremely important. He has stated them so forcefully and well that further emphasis in my remarks is scarcely appropriate. My discussion will be devoted principally to a few thoughts on a problem that underlies both of the papers that have been presented, but that is the more closely related to the subject matter of Professor Black's paper.

There is one comment in Professor Black's paper, however, to which I want first to take exception. Discussing pros and cons of the issue whether prices of farm products shall "be allowed to rise considerably the coming year, say 25 percent or more? or just a little, say 10 percent or less?" he says: "If prices of farm products were to be kept from rising 'considerably,' general food rationing needed to have been begun not long after the sugar rationing."

I would suggest, first, that the failure to introduce general food rationing in good time did not, and does not now, compel acceptance of a considerable advance in food prices. There is the alternative of facing up to a rationing problem that is more serious than it need have been. We have eaten into our reserves more rapidly than we should have been permitted to and we must now tighten our belts more quickly and perhaps a little farther than should have been necessary. Acceptance of considerable price rises now would not appreciably change the problem to be met. It would merely transfer to the price mechanism some of the burden of compelling restriction of consumption when, in the public interest, that restriction may better be accomplished by a good rationing system.

If the statement implies that food rationing might be avoided by permitting a general price advance at the rate of some 25 percent per year, that also deserves to be questioned. It may well be that if food prices were allowed to advance at such a rate while advances in other prices were sharply restricted food rationing could be avoided. But owing to the pressure for increases in wage rates that results from advancing food prices, such a course is scarcely a real possibility. If other prices, and wages, are to be allowed to advance at about the same rate as food prices, rationing of food will be necessary in about the same degree whether the rate of price advance be 10 percent a year or 25 percent a year.

What I have just said is merely in objection to what seems to me an unwarranted concession that Professor Black has made to those who favor considerable price advances. I turn now to the question, what can be done, in addition to the presentation of such cogent arguments as appear in his paper, to develop intelligent public opinion on the problem?

I suggest that one of the most effective lines of action is presentation of facts. A few facts introduced into an argument often change the whole course of the debate. They may lead to quick agreement where without them the outcome would have been merely frayed tempers and continued disagreement. Consider the issue that has recently been widely discussed: "what should be done to stop the draining of manpower from agriculture that has already brought us on the verge of food shortage." The whole trend of this discussion would be completely altered by general knowledge of the figures Professor Black cites, showing that the farm labor supply was larger by 120,000 workers on December 1, 1942, than a year earlier. There are many other facts that need to be widely known because current popular thought is founded on critical misconceptions.

During the past few years the case for restricting price increases has been advanced in many quarters, supported by facts drawn from experience in the last war. That is good, but we now have many facts from experience in this war that might be presented with even more telling effect. For example, let us have a calculation of how many more billion dollars this war cost during the calendar year 1942 than it need have cost if the Baruch plan had been put into effect when it should have been. And let the figures be presented, not in criticism of what was done—for there is little to be gained by dwelling on past errors—but as evidence of the vital need for correcting past errors.

Perhaps the major reason for preventing any considerable price advance is to avoid the personal injustices, the economic dislocations, and the loss to the public treasury that result from the inequalities in changes in incomes accompanying great price advances. Let us have promptly and widely distributed the facts as to what is currently happening to incomes in this war. Professor Black has made a contribution in this direction with his charts which compare net farm income to management and labor with payments to hired labor.

Many other income comparisons need to be made and brought to general public attention. It is pertinent to any discussion of price control and the many related economic questions that total United States income and several segments of it during the first ten months of 1942 compare as follows with averages for the corresponding months of 1935–39:[1]

Income	Percent of 1935–39
Classification by type of payment	
Total	165
Entrepreneurial income	155
Dividends and interest	105
Wages and salaries	
Commodity-producing industries	237
All other wages and salaries	152
Classification by source	
Agricultural income	196
Non-agricultural income	162

[1] Percentages computed from estimates of the U. S. Department of Commerce.

Some of the facts indicated by these income estimates need to be further analyzed. For example, it needs to be noted that the great increase in wages and salaries in commodity-producing industries reflected in considerable part an increase in number of workers and in number of hours worked. Average industrial wages in 90 industries during the first nine months of 1942, on a weekly and on an hourly basis, showed the following relations to wages during the same months of 1935–39:

Wage rate	Percent of 1935–39
Weekly earnings	161
Hourly earnings	138

With respect to agricultural income, it is well to have it known just how different regions have fared. For example, agricultural income from farm marketings plus government payments during the first nine months of 1942 in the West North Central region was at 201 percent of the average for the same months of 1935–39. For the North Atlantic region the corresponding figure was 174 per cent.

It is scarcely necessary to enlarge on the meaning of these figures even though time were available. Any economist will recognize the pertinence of such information to an understanding of what the policies that have been followed are doing to the economy of the country and of its citizens.

Many economists may object that the data cited above have various defects as a basis for sound interpretation. That is unquestionably true. More than ever before in the history of the nation we need now, week by week and month by month, reliable statistical gauges of the condition of the national economy. One thing that is now vitally needed, and that will shortly become more necessary, is a set of income estimates for different segments of the population that will show changes in income remaining after payment of taxes. The situation calls for extension and improvement of the data available, but it calls also for immediate full use of the best data now to be had.

One problem to be met is a disposition to restrict publication of statistics that might conceivably give some aid or comfort to the enemy. Care must be taken that restrictions are not imposed that handicap us more than they handicap the enemy. The utility of the official estimates of national income has been considerably reduced by elimination since January, 1942 of the estimates of wages and salaries in the three categories: distributive industries; service industries; and government. The stated reason for discontinuing these three series is "to avoid disclosure of military pay rolls." With wide publicity being given not only to figures on the size of the army but also to figures on numbers of men overseas, I find it difficult to see good reason for refusing publication to data showing merely the total of wage and salary payments by government. The loss of information from the related suppression of data on wages and salaries in distributive industries and in service industries is serious.

FOOD PRICE CONTROL—POLICY AND MECHANICS

S. A. Segal and A. C. Hoffman
Office of Price Administration

FOR the past eight months, nearly every sector of the nation's economy has been operating under full wartime price control. At the present time, some ninety percent of the food budget is purchased at controlled prices. These controls represent one of the greatest administrative undertakings ever attempted by the Federal Government. The stakes are high. The consequences of failure are well-known. Success means that we shall have forged not only a powerful weapon for total war but an instrument permitting a relatively easy adjustment to a peacetime economy.

As a nation we were even less prepared for price control a year ago than we were for military battle. The Federal Government was as unprepared to administer a program of the present scope as business, labor, and agriculture were to accept it. With a few exceptions, even the economists and other technicians were unprepared, for they had not supplied either the blueprints, the methods, or the statistics for price control. But for all that, the Office of Price Administration has today what the authors believe to be a sound equitable, and effective mechanism of price control. This mechanism, developed in the workshop of experience since Pearl Harbor, is now generally in effect throughout the food field.

In this war, as in the first World War, no great pressure on our food prices became apparent until about eighteen months after the outbreak of war. Similarly, for about a year after food prices began to rise, the price increases during this war closely paralleled those which had taken place during the last war. At the end of 1941 food prices stood about fifteen percent higher than the levels which had prevailed from the outbreak of the war through the first three months of 1941. During 1942, however, food prices have increased at a far less rapid rate than during the corresponding period of the last war. From January to November 1942, retail food prices increased by 12.8 percent compared with an increase during the corresponding period of the last war of 21.5 percent. Certainly this appreciably lower rate of increase must be attributed largely to the operations of the price control program.

The effectiveness of the experimental techniques which have been

in use until recently is indicated by a comparison of the trends of various groups of retail food prices. No foods were subject to price control at the retail level until May 1942, when the General Maximum Price Regulation was issued. Foods representing about 60 percent of the consumers' food budget were covered by this regulation. From May, 1942 through November, 1942 the retail prices of these foods increased by less than one percent. The prices of the remaining 40 percent of the food budget increased over the same period by more than 18 percent.

INDEXES OF RETAIL FOOD PRICES IN THE UNITED STATES
MAY–NOVEMBER, 1942
MAY 1942=100

1942	Total	Controlled	Uncontrolled as of October 1, 1942		
		beginning May 18, 1942	Total	Controlled beginning October 5, 1942	Uncontrolled as of October 10, 1942
May	100.0	100.0	100.0	100.0	100.0
June	101.3	99.0	104.8	103.1	109.4
July	102.5	99.2	107.4	105.4	112.6
August	103.7	99.7	109.7	108.3	113.0
September	104.1	100.2	110.1	110.8	107.9
October	106.6	100.4	115.9	116.4	114.3
November	107.8	100.8	118.4	117.2	121.3

Source: Bureau of Labor Statistics.

Effective October 5, 1942, the prices of some 30 percent of the food budget, previously uncontrolled, were frozen at September 29—October 2, 1942 levels by Temporary Maximum Price Regulation No. 22. The index of retail prices of these commodities, which had been increasing on the average by more than 3 points each month since May 1942 rose from October to November by less than one point. In this same month the prices of that 10 percent of the food budget which are still uncontrolled rose by 7 points, or over 6 percent.

Until recently food price control was implemented through a number of devices of an emergency nature. From August 1941 to May 1942 the Office of Price Administration operated on a basis which has been described as "selective price control." Before and during the first part of this period, at least, a general inflationary pressure was not yet apparent. The supply of consumers' goods

generally was still increasing and, in the case of food commodities particularly, general shortages seemed far in the future. Consequently it was deemed sufficient to limit price control to those commodities for which serious shortages developed or which began to show price advances arising from speculative activity. Furthermore price control was limited almost entirely to raw materials, since it is here that speculative elements were most manifest. With control at the raw material level, competition was still relied upon to hold down the prices of processors and distributors to reasonable levels. Prior to the attack on Pearl Harbor only two regulations were issued affecting the prices of two food products. Maximum prices were established for raw sugar on August 13, 1941, in Price Schedule No. 16; and restrictions on methods of trading and terms of sale were instituted for fats and oils in Price Schedule No. 25 on August 28, 1941.

Immediately after Pearl Harbor price controls began to be applied more frequently. Commodities, the prices of which were most susceptible to the new shipping conditions arising out of the declaration of war, were acted on immediately. The prices of green coffee, cocoa beans and cocoa butter, and of pepper were placed under ceiling on December 11, 1941, and maximum prices for all fats and oils were established the next day. Other regulations establishing maximum prices for refined sugar, tea, fish meal and scrap, animal product feeding-stuffs, canned fruits and vegetables, and dressed hogs and wholesale pork cuts were issued at varying intervals afterward. For some time, however, until the effect of our entry into the war could be analyzed more fully, the general techniques developed under the selective price control policy were adhered to.

These techniques were of two kinds which, although different in form and effect, arose from a common point of view. The first of these forms was the regulation which named maximum prices in terms of dollars and cents for a particular grade or other specification of a commodity at a particular stage in its marketing. More or less precise formulae were given by which the price for some other specification of commodity or in some other place than those named in the regulation could be computed. This technique could be applied only in the limited number of cases where certain prerequisites could be easily and quickly met. It was most important that the commodity covered by the classification be fairly homogeneous, that grades be well defined and generally accepted, and that there

exist a fairly active central commodity market or exchange. Only under these conditions were prices sufficiently well established and known that they could be translated into a schedule without a tremendous amount of preliminary research. The first regulation, on raw sugar, used the specific price technique as did many other early regulations such as the coffee and tea regulations.

When the decision was made to establish maximum prices for the great variety of fats and oils, it was immediately evident that the specification of dollar and cent prices for even the major oils would require the collection of an amount of data far beyond the resources of even the entire food price staff of that period. Recourse was had to a technique which, while less satisfactory in many ways, is probably the most efficient way of instituting effective price control in the shortest period of time. This "freeze" technique establishes the maximum price which a particular seller may receive for a commodity by reference to the levels at which he sold that commodity during a certain period of time, called the base period. The General Maximum Price Regulation with its amendments, supplementary regulations, amendments to supplementary regulations, and interpretations, is the outstanding example of the "freeze" technique, both as to effectiveness and problems involved.

Both of these techniques, the specific price and the frozen price, represented, except in a few instances, attempts to prevent further increases in the price of a particular commodity. Generally it was impossible to judge whether a particular price level was precisely correct in terms of any set of well-defined economic standards or criteria. Indeed within a very short period of time all the resources which the Office of Price Administration could devote to food price control were being taxed to find adequate and quick ways of establishing ceilings for the increasing number of food commodity prices which were beginning to show the effect of an unprecedentedly high level of purchasing power. By January 30, 1942, when the Emergency Price Control Act of 1942 became law, the emphasis was definitely on the extension of price control rather than the refinement of controls already instituted.

By the beginning of spring 1942, it was clear that even with greater resources of men and information than were available to the Office of Price Administration, selective price control was too slow to check inflation. Retail prices of food products, as of commodities generally, were turning sharply upwards, reflecting previ-

ous sharp increases at earlier levels of distribution. Fairly widespread action at the retail level was necessary and many difficulties appeared in any proposal to control retail prices of particular foods. The imposition of control on, say, canned vegetables, at the retail level would have involved the "freeze" technique. The announcement of such a freeze would be the signal for an immediate rise in other retail food prices, anticipating another such freeze. From many angles, it was apparent that the nature of the problem had changed radically and that an immediate change of policy was necessary.

Selective price control was supplanted by a general freeze covering most commodities that at the time could be legally subject to price control. The General Maximum Price Regulation will stand out as the greatest single weapon in the fight for economic stability. Its effectiveness in holding down the prices of these foods which it governed has already been indicated. This record appears to be even more remarkable in view of the failure to implement effectively the other points of the President's seven-point program. Measures to drain off excess purchasing power by increased taxation were not only slow to issue but inadequate when issued. Only the first steps had been taken toward rationing. Neither farm prices nor wages were stabilized. Moreover, the General Maximum Price Regulation was necessarily a blunt instrument, of wide range, but relatively little precision. Its effectiveness, therefore, must at least in part be attributed to the cooperation of the thousands of buyers and sellers who worked under it.

In simple terms, the General Maximum Price Regulation provided that no seller could sell any commodity governed by the Regulation at a price higher than the highest price at which he sold that commodity during the month of March, 1942. Successive provisions were made whereby a seller could calculate his maximum price in various other ways if he was unable to derive a price from any of the preceding provisions. Since this regulation covered such a great variety of commodities at almost all levels of production and distribution, these alternative pricing provisions were of a very general nature and gave rise to many questions of interpretation and application. By and large, however, sellers governed by the Regulation were able to find their way, and production and distribution continued without significant interruption.

The major inadequacy of the General Maximum Price Regula-

tion was the exclusion of certain commodities from its provisions. By far the greater part of these exclusions consisted of food products. The general exclusion of "any raw and unprocessed agricultural commodity . . . while it remains in substantially its original state" left free not only such basic crops as wheat, corn, and the whole range of fresh fruits and vegetables, but also the farm prices of many food commodities which were subject to maximum prices in a processed state. Many food products were specifically exempted at all levels of production and distribution, the most important of such specific exemptions being eggs, poultry, flour, mutton and lamb, fresh fish and seafood, dried prunes, dry edible beans, all nuts except peanuts, linseed oil, cake, and meal, and mixed feeds. Of all the dairy products, only ice cream and fluid milk and cream sold at retail were covered. Finally, sales by restaurants of food "prepared and sold for consumption on the premises" were excluded.

The policy which determined these exclusions involved no economic considerations whatsoever. Such exclusions as fresh fish and seafood, restaurant sales, and the general exclusion of raw and unprocessed agricultural commodities were dictated by the simple facts that the general nature of the provisions in the General Maximum Price Regulation were totally inadequate for these commodities and that no plan had yet been devised which could overcome the great administrative difficulties of controlling the prices of these commodities. The most important factor determining the exclusions, however, was the provisions of Section 3 of the Emergency Price Control Act of 1942. Essentially this section provided that no maximum price could be established on an agricultural commodity below the highest of the following prices: (1) 110 percent of the parity or comparable price, (2) the market price on October 1, 1941, (3) the market price on December 15, 1941, and (4) the average price during the period July 1, 1919 to June 30, 1929. More important, no maximum price could be established for a commodity processed in whole or in substantial part from an agricultural commodity which failed to reflect a price to the farmer as high as the highest of these four criteria. Practically all of the specific exclusions of agricultural commodities were determined by this legislation.

It was not until October 5, after the amendment of the Emergency Price Control Act, that most of these excluded food products could be brought under control. This amendment removed all of

the agricultural price limitations in the original Act and substituted the following: (1) the parity or comparable price, (2) the highest price between January 1 and September 15, 1942, and (3) directed that any maximum price established should take into consideration the increase in farmers' expenses, including the cost of farm labor. The second of these limitations was qualified in that a lower maximum price could be established on the President's determination that the establishment of a price reflecting this level would constitute a gross inequity. On October 5, 1942, the Office of Price Administration froze the prices of eggs, poultry, mutton, potatoes, onions, fresh and canned citrus fruits, flour and flour mixes, dry edible beans, peas and lentils, and corn meal and hominy at the highest prices charged by each seller during the period September 28 to October 2, 1942. Fresh fish and a number of fresh fruits and vegetables are the only important foods not now under price control.

Apart from the exclusions the administration of the General Maximum Price Regulation presented many problems. A great many of these are contained in the single term "squeeze." A squeeze occurs when a seller is unable to obtain a price for his product which will cover his costs plus a "reasonable" or "normal" profit. In a free economy such squeezes are commonplace and are generally attributed to bad luck or bad management. Under price control a squeeze was almost universally, and often correctly, attributed to the existence of the seller's maximum price. But a great many sellers have tended to forget that the price control squeeze has to a considerable extent merely replaced previous squeezes. Apparently it did not matter that a given seller had been losing money for years. With the advent of price control the onus was promptly fixed on Office of Price Administration.

In the early days after the issuance of the General Maximum Price Regulation, the term "squeeze" was generally limited to that which results from freezing prices at all levels of distribution at the same time. In a period of rising prices there is usually a lag in the prices at a given level of distribution behind the prices at the previous level of distribution. Therefore, as soon as a producer or distributor used up the inventory on the basis of which his frozen price was determined he often found that he could replace those inventories only at a price which squeezed the maximum prices at which he had to sell.

The technique which was devised to meet this problem was

termed the "rollback." The idea was simple—if, by and large, the retailers of a given product were being squeezed, the wholesale price would be reduced either by a given number of dollars and cents per unit or by reestablishing the individual wholesalers' prices as of an earlier base period. Because of the limited data available, in actual practice resort was most frequently had to the earlier base date technique. Similarly, if wholesalers generally were being squeezed on a particular commodity, the processor prices would be "rolled back."

Another type of squeeze which called for the rollback technique resulted from the very general nature of the language in the pricing provisions of the General Maximum Price Regulation. In case after case processors were legally able to interpret these provisions in such a way as to result in price increases to distributors.

As it happened, use of the rollback was somewhat limited. Data on wholesale and retail prices and margins were practically nonexistent and limited resources made their collection and tabulation a slow process. When sufficient data on a particular product had been collected, it was frequently found that a thorough-going rollback would ultimately require a reduction of farm prices below the levels specified in Section 3 of the Emergency Price Control Act. On some imported foods a rollback would have entailed undesirable international repercussions. In still other cases a rollback would have reduced prices below the point required to elicit the required volume of production. In these cases rollbacks were feasible only insofar as some form of subsidy could be made available. Rollbacks on some imported foods, the most important of which was coffee, were made possible by the actions of the Commodity Credit Corporation and the War Shipping Administration in absorbing the increased cost of marine freight and war risk insurance, and in providing new war risk insurance rates at greatly reduced levels. The Commodity Credit Corporation also undertook to absorb a rollback on some oils made necessary by a squeeze on shortenings, salad oils, mayonnaise, etc.

Another type of squeeze appeared at the processors' level as a result of increasing farm prices. Under certain conditions a ceiling at the processor level can be relied on to prevent increases at the farm level. But different processors may have widely varying abilities to absorb increased costs. In a sellers' market those processors with the higher "cost absorption potentials" will bid up the price

of the farm product to levels which squeeze less fortunate processors. Squeezes of this nature occur also in a free market but actually occurred more frequently and with greater intensity under the General Maximum Price Regulation simply because processors were frozen at individual and widely varying prices. In order to reduce this squeeze to the proportions which are normal in a free market it was necessary in many cases to establish uniform dollar and cent prices. The task of establishing such uniform specific prices was of the greatest difficulty, involving the collection, tabulation, and analysis of previously unobtainable data as well as the resolution of a great number of important issues of policy. Such uniform prices have been determined for a number of important canned fish items, most of the important fats and oils, and more recently for a number of important perishable foods.

There is another type of squeeze, occurring usually at the farm level, which is often mistaken for that discussed just above. The squeeze, while real, is actually the result of a relative shortage of manpower and certain materials rather than of the level of maximum prices. In general the relationships between the prices of various commodities are such that one industry can afford to pay more than others for a given resource, whether it be labor or soybean meal. Even in an economy in which prices were permitted to rise freely, the integrity of this price structure would be sufficiently maintained so that in case of shortage the marginal users of a given resource would have to go without. Price increases give no relief in such cases, and accordingly no such price increases have been granted. An increase in the price of milk will not enable the dairy farmer to compete with a munitions plant operating on a cost-plus contract.

Finally, there was the squeeze called the "individual anomaly." It must be anticipated when using the freeze technique that a considerable number of sellers will be caught with prices "out-of-line" with their normal relationship to the prices of competitive and comparable sellers. Provision was made in the General Maximum Price Regulation whereby such sellers could petition for an adjustment of their individual maximum prices if selling at these prices created a hardship.

The number of applications for adjustment was enormous and even though adjustments for retailers were handled in the field, the processing of those adjustment cases coming to the Office of Price

Administation's national offices was much too great for efficient handling. Some time elapsed before suitable criteria could be worked out by which "out-of-lineness" and "hardship" could be measured. In many cases adjustments were delayed in favor of more pressing industry-wide actions and undoubtedly many mistakes were made. It was not until the end of 1942 that the determination was finally made that sufficient time had elapsed for the more necessary adjustments to have been made and that in the future, activity would be confined to the necessary industry-wide actions.

In issuing the General Maximum Price Regulation, the Office of Price Administration was fully aware that the March level of retail food prices could not be held unless farm prices and wage costs were also controlled. It was also fairly evident that the measures necessary to control these elements would almost certainly not be taken in time. The battle-cry of Office of Price Administration that the March ceilings would not be pierced was shouted in the desperate hope that somehow there would be provided the funds with which to work out a subsidy arrangement to absorb increasing costs of farm products and perhaps wages. No such funds were forthcoming, and the March ceilings eventually were pierced.

Increases in the maximum prices established by and prior to the General Maximum Price Regulation were made necessary for a number of reasons of which three are paramount. First, there were a significant number of food products placed under control even though the March farm prices of the agricultural commodities were below the agricultural price limitations in the Emergency Price Control Act. These food products would not have been placed under control, however, except under such conditions that the ceiling at the processor level could not prevent increases in the farm price. This was possible, for example, if the food under control represented only a very small proportion of the total utilization of the agricultural commodity or if processor margins were abnormally large. When the prices of these agricultural commodities began to rise there was no way to prevent a break in the ceilings. Secondly, in the case of several very important foods, such as some fruits and vegetables, prices higher than the legislative minimum ceilings were necessary to induce the required volume of production. These were among the first instances which involved price management as opposed to simple control. Third, there were fairly numerous cases,

and these were not confined to agricultural commodities, where manufacturers had already purchased raw materials and made wage rate commitments which altogether precluded the possibility of maintaining maximum prices reflecting inventory costs and wage rates based on contracts made as much as a year prior to the establishment of the maximum price.

Although in some cases these price adjustments were made by establishing dollar and cent ceilings at a level higher than the average individual ceilings, in most cases time did not permit the requisite preliminary analysis. Resort was had to a formula, the general pattern of which was established by Maximum Price Regulation No. 152, raising the maximum prices which had been established for canned vegetables early in March, 1942. This general pattern consists of: (1) the establishment of a base period, usually representing the beginning of the season in 1941, when presumably the prices of the several firms in the industry were in normal relationship; (2) a grant of permission for each processor to add to his price the increase in costs from the base period to a specified date. The cost increases granted were hedged about with various restrictions and limitations. If the processor had already completed his pack or contracted for his raw materials, he could add the difference between his average cost of raw materials in the base period and the new contract prices. Sometimes he was limited to stated amounts in dollars and cents in computing his increased raw material costs. In almost every case he was subject to a specific limit in the amount he could add to cover labor and other costs. In addition to canned vegetables many other commodities such as canned fruits, frozen fruits and berries, jams, jellies, and preserves were placed under separate formula regulations.

For some commodities, the margins of most distributors apparently were sufficiently large so that the cost increases granted processors could be absorbed. Generally the opposite was true, however, with the result that adjustments were also necessary at wholesale and at retail. In making these adjustments, the regulation required the manufacturer to notify the wholesaler of the amount of the price increase which he had been allowed, permitted the wholesaler to raise his own individual maximum price by that amount, required notification by the wholesaler of the retailer who in turn was permitted to raise his price by that amount. The effect of the issuance of these regulations was that a particular distributor

was governed by many separate regulations. It would appear, therefore, that the complexity of price control at distributor levels, which has been so severely criticized, stems much more from the permitted price increases than from the operation of the General Maximum Price Regulation.

In order to remedy the growing complexity of distributor pricing, Office of Price Administration has issued a number of regulations governing wholesale and retail prices of foods. One important step was taken with the issuance on October 31, 1942 of Maximum Price Regulations 255 and 256. Commonly referred to as the "permitted increase regulations," these regulations provide a standard procedure by means of which wholesalers and retailers can pass on the price increases which have been granted to their suppliers. Previously the commodities governed by these regulations had been priced at the distributor levels by a number of regulations which provided a somewhat different "permitted increase" procedure for each commodity.

The permitted increase technique, like the formula technique at the processor level, is a quick way of making necessary adjustments. It is also a clumsy administrative tool, and may give rise to a price structure which is inflexible and often haphazard and unpredictable. It tends to continue any given variation in the prices of the individual sellers, and insofar as some of these individual prices are sufficiently high to absorb the permitted price increases, it establishes a price structure which averages higher than necessary. For the most part, therefore, the use of the permitted increase technique has been limited to those commodities which presented problems requiring immediate adjustment and where the permitted increases could not be absorbed by most distributors. More recently, Maximum Price Regulations 255 and 256 have been made to govern a number of relatively unimportant miscellaneous food commodities, such as potato chips and fig bars, etc. for which the research prerequisite to the establishment of alternative methods of distributor pricing would not be warranted by the importance of the commodities.

The need for a more efficient distributor pricing and adjustment mechanism was apparent soon after the middle of 1942. The necessary research was undertaken immediately and on October 10, 1942, the Office of Price Administration issued Maximum Price Regulations 237 and 238, applying to wholesalers and retailers re-

spectively. These regulations are margin orders, providing specific percentage markups which may be applied by a distributor to his "net cost" of any commodity falling within a certain commodity group, such as canned vegetables or breakfast cereals. These regulations continue the normal price relationships of a free market and prevent an intensification of the trend toward concentration by specifying different specific markups for several classes of distributors. Separate provision is made for three classes of wholesalers, the classes being based on service offered and structure, and for five classes of retailers, from the small independent retailer grossing less than $20,000 per year to the large supermarkets, both chain and independent, with annual gross returns of $250,000 and more.

The percentage markups provided in these regulations are of two kinds. For some commodities the markups are called "fixed." These markups in one sense are maximums since while the distributor's selling price may not exceed, it may be less than, his net cost of certain purchases plus the markup. They are fixed in the sense that once the markup has been applied to certain defined purchases, the maximum price thus computed is fixed even if subsequent purchases are made at higher or lower prices than were paid for those purchases which determined "net cost." The second type of markup, designated as "minimum," is used to calculate maximum prices which distributors may, at their option, use as alternatives to their ceilings as determined by the General Maximum Price Regulation. These "minimum" markups were established in order to relieve distributor squeezes in a somewhat more equitable manner than could be accomplished by using the permitted increase technique and have since been largely replaced by fixed maximum markups.

Maximum Price Regulations 249 and 250, issued October 26, 1942, are margin regulations governing the distributors' prices of a number of unimportant seasonal food items, such as plum pudding and dried figs, for which the determinations of percentage markups is exceedingly difficult and not worth the expenditure of skill and time involved. These regulations provide simple formulae by means of which a wholesaler or retailer may easily compute his 1941 percentage markup, under which he is permitted to operate.

By the time the Emergency Price Control Act was amended and price control extended to cover the great bulk of food products, the blueprints for a new structure and technique of food price control

had been drawn. The basis of this new structure was provided by the solutions to the various problems which had arisen under the operation of the General Maximum Price Regulation. In the simplest terms, the blueprint calls for the establishment of specific dollar and cent ceilings at the processor level and of maximum margins for wholesalers and retailers. Important steps in the building of this structure had already been taken with the establishment of specific dollar and cent prices for a number of significant food items. The basic distributor regulations had been written and issued and it remained only to extend their coverage to other food commodities. It is planned that eventually maximum margins will be provided for all the important foods now governed at distributor levels by the permitted increase regulations.

This general structure was sufficiently well established by the beginning of October so that after the issuance of Temporary Maximum Price Regulation 22, the research necessary to fit the commodities governed by this regulation into the new structure was instituted immediately. In carrying out this task it was found necessary in the case of perishable food commodities to carry specific dollar and cent pricing by zones through the wholesale level. Such specific prices are now provided for such important food products as beef, pork, lamb and mutton, potatoes, onions, poultry, butter, cheese, and evaporated milk. It was also found necessary to make somewhat different markup provisions for perishable commodities, although the same general mechanism is employed. Maximum Price Regulation 268 provides for the pricing of certain perishable food commodities at retail.

The relationship of this structure to the problems encountered under the General Maximum Price Regulation and other freeze regulations is apparent. The many problems arising from varying individual ceilings will be solved. The difficulties of pricing by comparison and analogy or by complicated formula will be eliminated and the ability to enforce compliance correspondingly enhanced. Individual inequities will be considerably reduced. The complexity and number of regulations governing distributors will be reduced to a few relatively simple markup regulations. And most important, it will provide a degree of flexibility that is essential to a policy of price control which contemplates the management of prices rather than the mere prevention of price increases.

This flexibility is being further enhanced by the increasing dele-

gation of responsibility for local price problems to the regional offices of the Office of Price Administration. In Amendment 33 to the General Maximum Price Regulation the regional offices were empowered to make such price adjustments as are necessary to relieve local supply shortages of essential commodities. On the basis of this general delegation the establishment of maximum prices for fluid milk in particular areas by the appropriate regional offices has been speeded and the number of administrative problems has been reduced.

While the main lines of the structure are simple in concept and application, the task of filling these dollar and cent processor regulations and the various distributor regulations with actual prices and margins involves not only the collection and analysis of a great mass of price, cost, and margin data but also a considerable number of important policy issues. Too low a price will tend to create or intensify a tendency toward industrial concentration. Many problems of grading and quality control have to be met. For example, in establishing dollar and cent prices for such products as canned vegetables, the prices must be specified by grade with no allowance for advertised brands. At the present time the maximum price levels of many commodities are based on parity. It remains to be seen whether or not the relationships between parity prices are suitable for a war economy. It is extremely unlikely; and if not, the necessary price relationships will have to be constructed so that the lowest price still covers parity. It may even be possible to achieve the ultimate in self-enforcement—specific dollar and cent maximum prices at retail.

On the whole, however, the pattern of food price control has been set. This particular pattern is not arbitrary, but is a necessary one evolved out of an experience in which every flaw and every mistake received the heated attention of producer, distributor, and the public. It is a pattern which will leave us, when the war ends, with a price structure from which a return to a free market should not be too difficult. For the duration the problem is not so much the mechanics of price control as the social courage to hold prices down.

DISCUSSION BY GEOFFREY SHEPHERD

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Comments on this paper by Segal and Hoffman will best be made later, after enough time has elapsed for the indexes of retailers', wholesalers' and

WHOLESALE PRICES
MAXIMUM PRICE REGULATION NO. 237
October 15, 1942

Appendix A

Food product	Figure to be multiplied by net cost of item in determining new maximum prices under this regulation		
	Class 1 Retail-owned cooperative	Class 2 Cash and carry	Class 3 Service and Delivery
Cereals, breakfast	1.035	1.06	1.08
Coffee	1.035	1.035	1.06
Fish, canned	1.055	1.11	1.135
Oils, cooking and salad	1.04	1.055	1.08
Rice	1.04	1.055	1.08
Shortening, hydrogenated	1.03	1.03	1.035
Shortening, other	1.035	1.035	1.04
Sugar, cane and beet	1.02	1.02	1.04
Vegetables, canned	1.06	1.085	1.135
Appendix B			
Fruit, dried	1.055	1.125	1.165
Lard	1.035	1.035	1.075

RETAIL PRICES
MAXIMUM PRICE REGULATION NO. 238
October 15, 1942

Appendix A

Food product	Figure to be multiplied by net cost of item in determining new maximum prices under this regulation				
	Independent retailer with annual volume			Class 4 Chain retailer with annual volume under $250,000	Class 5 Any retailer (chain or independent) with annual volume of $250,000 or more
	Class 1 Under $20,000	Class 2 $20,000 but less than $50,000	Class 3 $50,000 but less than $250,000		
Cereals, breakfast	1.22	1.22	1.20	1.13	1.11
Coffee	1.11	1.10	1.10	1.09	1.07
Fish, canned	1.23	1.20	1.20	1.16	1.14
Oils, cooking and salad	1.23	1.20	1.17	1.16	1.14
Rice	1.20	1.20	1.20	1.18	1.15
Shortening, hydrogenated	1.07	1.07	1.05	1.05	1.05
Shortening, other	1.16	1.14	1.12	1.09	1.07
Sugar, cane and beet	1.17	1.16	1.12	1.07	1.06
Vegetables, canned	1.25	1.23	1.23	1.21	1.19
Appendix B					
Fruit, dried	1.27	1.25	1.25	1.23	1.22
Lard	1.20	1.20	1.18	1.13	1.10

processors' prices to show the effects upon margins of the uniform percentage markups of the kind prescribed in Maximum Price Regulations 237 for wholesalers and 238 for retailers. The wholesale and retail markups specified in these regulations are so interesting and crystallize a major section of national policy in such clear-cut terms that I am reproducing them herewith.

The authors explain that these regulations "continue the normal relationships of a free market and prevent an intensification of the trend toward concentration by specifying different specific markups for several classes of distributors." This raises several questions which I should like to see specialists in wholesaling and retailing explore thoroughly. Does the excerpt in quotation marks above reflect the considered policy of the Office of Price Administration? Is that policy in the best interests of a wartime economy? Will the percentage markups given prevent an intensification of the trend toward concentration, if they continue the normal relationships of a free economy? If as I presume the markups do reflect normal relationships, what are their implications for policy after the war? I am just asking. But I should like to see the answers to these questions worked out and presented in the same systematic and impartial style that characterizes Segal and Hoffman's present paper. Perhaps the same authors could do it a few months hence.

AGRICULTURE IN AN EXPANSIONIST ECONOMY[1]

CONRAD H. HAMMAR
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THE economies of all nations are at present being mercilessly driven by the exigencies of war. Employment and production are being expanded to the utmost and yet there is scarcity in the midst of huge output. The problem is not how to find work for men but how to find men for the work that needs to be done. The thing that is most intolerable now is inefficiency that stands in the way of further expansion of output. As contrasted to the situation in the decade of the thirties when stagnation was the rule the economy is now expansionist.

The program for agriculture in the United States got most of its vestments during the thirties and these vestments from which so much was hopefully expected now appear ill-fitting and awkward. The policies and programs of that period were designed, it now appears, with the influence of stagnancy too much in the ascendency. New and powerful economic doctrines and viewpoints have appeared and this fact together with the present expansionist economy raises many questions relevant to the existing program but of these many, three bear most directly upon the topic under discussion. These three are: (1) What is an expansionist economy and what is the condition and role of agriculture in such an economy, (2) Are present agricultural policies and programs suitable to an expansionist outlook, and (3) How can such policies and programs be made to contribute a maximum to the continuation of an expansionist economy assuming such an economy to be desirable?

What is an Expansionist Economy?

Nothing is so disconcerting to the economist as "scarcity in the midst of abundance" which is really scarcity in the midst of unemployed men and unutilized resources and equipment. Such a situation is sure to give rise to many proposals for reform and set in motion programs for economic adjustment. In the early thirties the economy was counted as badly unbalanced and proposals for adjustment fastened on this fact and the programs devised sought

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[1] Contribution from the Department of Agricultural Economics, *Missouri Experiment Station Journal*, Series 883.

to restore balance in the hopes and belief that such restoration was a prerequisite to the resumption of activity. The effort of this kind in the thirties was very great and the striking aspect of the effort seems now to be the rather meager results obtained from internal adjustment alone. The nasty comment that it has been "chiefly adjusting the engine with the gasoline tank empty" must have appeared to many as neatly appropriate. In fact, the adjustment had not up to 1939 cut very deep into the knot of stagnation and left many with the feeling that economists equipped with available tools had few of the needed answers.

The quickness with which defense and war dispelled the stagnation fitted into the conclusion slowly emerging from the doubts centering on existing economic doctrine and gave force to the idea that an economy doesn't run always and only on its own power but in part and often in large part in response to external forces. A new economic doctrine arose in the middle and late thirties rationalizing, in what is still a somewhat preliminary manner these new conceptions. For Americans there were two major parts to this new doctrine. First, came the explanation of why a private enterprise economy addicted strongly to thrift tended persistently to unemployment and under utilization except when driven powerfully from without.[2] Second, was offered an explanation why depression in the United States had been so persistent in the thirties despite a long history of expansionism that continued with only occasional serious relapse all during the 19th century and up to 1929.[3] During the 19th and early 20th centuries growing population and constant opening up of new lands were continuously operating forces for expansion and technological forces sometimes provided additional powerful stimuli.

With two of these forces—new lands to open up and population increases—largely spent but the savings fund potentially larger than ever because of a higher national income, the threat of potential stagnation in the United States is great. Indeed the threat is probably greater in the United States than elsewhere because investment outlets must be so great where potential savings are continuously so large. Technological advances which may be exploited remain, to be sure, but are an unsteady and unpredictable force hardly to be relied upon as a sole outside agency. Expansion,

[2] See J. N. Keynes, The General Theory of Employment Interest and Money.
[3] See, particularly A. H. Hansen, Fiscal Policy and Business Cycles.

it has been predicted, is likely to depend during peace periods more and more on social or governmental action in the future.

An expansionist economy involves, therefore, two matters: A condition and an ideal. The condition is full employment of labor, full utilization of resources and, particularly, abundant investment outlets so that savings may be used constantly and not merely intermittently to increase the fund of capital in existence. The establishment of full employment as an ideal or social objective is imperative because too much is at stake to leave it to chance or laissez-faire. The parade of depressions all during the 19th century even when the economy was sustained by rapidly growing population and great new resources to open up suggests that a private enterprise economy, despite its many other desirable characteristics is not robust in the vital matter of providing continuously full employment. Probably seldom, except during war periods, has maximum output been achieved in the past. Even in 1929 and in the golden period of the late twenties only 80 per cent of productive capacity was being used according to a study of the Brookings Institution.[4]

Despite the great political objections to the use of government funds to support investment and employment, fiscal policy may have to be relied on increasingly because of the even greater weaknesses of other reform proposals. These can be referred to only briefly here. Antimonopolist advocacy of freer competition to insure full employment, for instance, runs counter to the powerful modern drift toward business and social organization recently made even more powerful by the impetus given to it by war. Organization is not necessarily antagonistic to full employment but achieves it by different methods than does competition. The use of monetary policy in the interests of full employment will continue but apparently more and more as an auxiliary to fiscal policy rather than the other way around considering the experience of the 'thirties. Employment and price levels are not independent and the future will apparently as often see employment used to strengthen prices as prices used to strengthen employment. Finally, the theory that depressions and stagnation are "politically induced" has the almost fatal weakness that it carries the implication that private enterprise and investment are no longer the powerful forces they once were but must be coddled, cajoled and pampered if they are to remain

[4] See Nourse and associates, America's Capacity to Produce.

responsible for the maintenance of employment.[5] Politics is a necessity and will certainly not down so that forces that are "afraid of politics" in the end become subordinate to it.

An expansionist economy is, therefore, one in which a definite objective of maintaining full employment is established and the institutional structure readapted toward the attainment of the ideal.

Expansionism and Present Programs

Established agricultural programs were designed more to achieve such goals as "adjustment" and "parity" than to contribute a maximum to expansionism or to keeping the economy fully employed. The parity concept is one of price "balance" the idea being apparently that such balance would stimulate employment though quite certainly the exact reverse may be quite as true. That is, the "unbalanced" prices of the period of the 'thirties meant cheap raw materials and low cost raw materials should have been a stimulus to employment, other things being equal. At least it is difficult to understand why recovery should be carried forward by higher raw material costs. Many groups get so hopelessly entangled that they called both for lower wages and higher raw materials costs to stimulate recovery though how such demands could be consistent it is difficult to conceive.

Actually the price structure of a depression period appears to be in "balance" when raw material and farm prices are relatively low and of a boom period when such prices are relatively high. That is, the "balance" is in considerable part the result of the level of employment. Looked at from this viewpoint, the established agricultural program appears to be confusing cause and effect and to be driven from the wrong end.

Actually "parity" is an extraordinarily awkward goal of agricultural policy. During the depression it sets the drive for parity ahead of the drive to reestablish employment thus getting the cart

[5] Dr. Black has put this same matter in a similar light in his statement. "A major factor in the poor working of the economy in the last few decades is that much venture capital has the wrong kind of reservation price. It is not interested in moderate rates of return, but prefers to gamble on large rewards. This is the natural inheritance of frontier years of the republic when vast natural resources were made available for exploitation. In this more mature stage of the economy, secure rewards will have to take the place of an uncertain but somewhat higher average return. It takes time for any dominant group to revise its attitude as completely as is called for in this situation. In the meantime, all classes of society suffer. They suffered severely from this attitude of the venture capitalists from 1933 to 1940." Parity, Parity, Parity, p. 233.

before the horse. It sets for the nation the goal of raising farm product prices just when the purchasing power of consumers is least and when the great ray of hope for the unemployed and underemployed is the low cost of food. Parity, in effect, holds out the false hope to farmers that prices will be restored just when there is least hope that this can be done. On the other hand, parity is a boomerang in such periods of high employment as the present. "Farmers," so the reasoning of the public now goes, "asked for parity prices,—are now getting them—and are extremely selfish to demand more." Yet the costs of an increasing cost industry rise disproportionately at higher output levels so that balanced prices and costs demand something more than "parity" when farm output has been lifted as greatly as it has during the war effort.

This aspect of the present program has, therefore, the unfortunate effect of putting farmers in the worst possible light as a selfish pressure group both in depression and prosperity. Actually little may be accomplished to raise farm product prices when there is great unemployment[6] and the consequent weakness of demand except by the method of production reduction[7] that hurts almost as much as it helps. Resort was made, therefore, to benefit and parity payments and the defense of the present program has increasingly been in terms of the stimulus to employment and recovery to be expected as a result of the distribution of purchasing power to the farm group.

The whole program would deserve to be in better repute if the parity program had been dropped early in the thirties and the whole effort concentrated on realigning the program to give a maximum stimulus to recovery. In actual fact, the design of the program substantiates even today the belief that the objective of stimulating investment and employment was and is a strictly secondary concern since not even in later years has there been serious effort to readjust the program in that direction. The design of the program has been and is chiefly to subsidize farmers out of the public treasury and *incidentally* to contribute, as in fact it does, to recovery. The design should be exactly reversed in the author's estimation so that farmers are subsidized (during depressions) if at all only as a means to stimulate employment. Otherwise farmers are set up as a pres-

[6] Though by determined effort something may be done to hold them down during the war effort.

[7] Back to the land movements also increases the difficulties of production reduction.

sure group promoting wholly selfish ends and not, as they should be, a group working with others in the economy toward a common end. Some clash of group interest there is bound to be in society and farmers have group interests that they must strive aggressively to achieve but a policy that does not make the most of common ends is inferior to one that does.

The reasons why the present program is poorly designed to contribute a maximum to recovery and the maintenance of employment are too numerous for all to be taken up in detail. I shall deal with a few only.

One of the things that sustains and lifts employment when it is low is an increase in consumption. Have benefit and parity payments, much the largest of all items of outlay under the program, been distributed in such a manner as to make a maximum contribution to consumption and, hence, to employment? The answer is: No! If such payments are to be used promptly and wholly in consumption they must be paid to people who will not save or hoard an appreciable portion of them. In actual fact, the bulk of the payments went to the states with much the wealthiest farmers. In 1940, for instance, the payments to 362,479 persons cooperating in conservation programs in Illinois and Iowa amounted to $60,645,000 while to 507,010 cooperators in Kentucky and Tennessee these payments totaled only $19,624,000. The distribution in 1939 was much the same. In the fiscal period, July, 1939, to June, 1941, the total expenditure for all programs in Illinois and Iowa were $191,008,000 and in Kentucky and Tennessee $54,255,000. The farm population of Kentucky and Tennessee is much greater than that of Iowa and Illinois and the per capita farm wealth and income much less. The conservation payments per payee in Iowa and Illinois totaled $182 and $140 respectively in 1941 but only $44 and $34 respectively in Kentucky and Tennessee. More important than this last, however, these payments were in general roughly proportional to the incomes of the recipients in all states so that those families with the largest incomes everywhere received the largest payments.

Farmers are like others in that those with the greatest incomes save the largest portions of their incomes as indicated in Figure 1.

But farmers also are unusually thrifty and save more out of a given income than do nonfarmers. The savings out of these benefit and parity payments were, therefore, almost certainly unusually

large and the stimulus to employment because of increased farmer consumption decreased somewhat in proportion. Just how great is the reduction, however, it will be impossible to say until more is known about how farmers' savings are handled. If they are largely pumped into the general savings stream as may be the case they are merely one addition to the funds that are, during periods of depression and stagnation, finding only a sluggish outlet in invest-

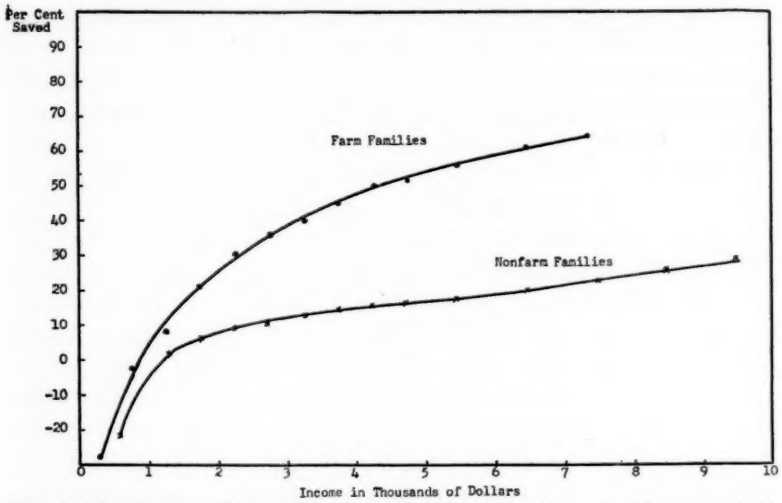

FIG. 1. THE SAVINGS INCOME SCHEDULE,* FARM AND NONFARM FAMILIES, 1929

ment. In actual fact a large portion of these farmer savings certainly did find their way into the general savings stream during the thirties. Farmers do not build up great savings accounts as such but they do pay their debts which transfer their savings to such financial agencies as the Federal Land Banks, insurance companies, and other credit institutions. These in turn purchase outstanding bonds of their own or make financial investments and thus place the farmers' savings in the general financial channels.

A point needs to be made of the fact also, that farmers had little reason to use their savings in construction and improvement on their own farms in the thirties so as to give employment in that manner. Agriculture was overextended by 1920 and had not finished contracting by 1930. The need in the thirties was to reduce rather

* Arranged from data of Appendix Tables 5 and 6—America's Capacity to Consume, Leven, Moulten and Warburton.

than to expand the farm plant and this fact had been abundantly indicated by the events transpiring in the twenties. The number of farms had decreased appreciably and the farm population had shrunk approximately 2,000,000 during that decade. Land values and the value of farm property had fallen drastically so that in the United States as a whole farm real estate values in total were in 1933 (at their low point) only 46 per cent of what they had been in 1920. Farmers were, therefore, more nearly in the mood to liquidate than to invest. The press of the nation had, furthermore, been hammering on these developments for the full decade and the investment outlook for agriculture was, so far from being regarded as expansionist, certainly and universally known to be one of the most depressed in the country in the early 1930's. In one respect only must this conclusion be modified. That is, by 1935 and 1936 there had been a sufficient obsolescence and depreciation in farm machinery so that a modest upswing in purchases occurred. However, the general conclusion remains that payments to farmers under the programs arranged were made under such circumstances as to have not the maximum but close to the minimum effect on employment and recovery as far as their effect on consumption and investment within the industry was concerned.

In the conservation aspects of the program too the matter of stimulating farm investment has great relevance. If there was one point in farming where investment was still badly needed in the thirties it was in the provision for the conservation, or better restoration and improvement, of soil resources. The soils and range building practices payments of the general program was one of its brighter aspects from the viewpoint of the stimulation of employment and investment. The weakness of the propensity of farmers to invest was, however, clearly indicated by the difficulties encountered nearly everywhere in getting farmers to earn all these payments that were made available. Part of this difficulty was administrative, that is because of the lack of understanding of how best to arrange the payments so that farmers would be stimulated to earn them. Apparently the grants in aid program did much to overcome farmer resistance but just how much, remains a matter of surmise. Had the program been designed with an aggressively expansionist viewpoint far more funds could probably have been used to stimulate what may be briefly labelled "conservation investments." A great share of the payments for conservation under

the present program provides too little incentive to investment and hence have unfortunately little income generating power for society at large.

The program of the Soil Conservation Service needs also to be considered from the viewpoint of the stimulation of recovery resulting from its expenditures. In brief, these expenditures were, perhaps unavoidably, poured out through an immense overhead organization at national, regional, state, and district levels so that the salary budget for highly paid personnel was a considerable proportion of its total outlays. Since savings increase disproportionately with income, the income velocity of these outlays of the Soil Conservation Service was much less than would have been the case had it been possible to make a greater proportion of outlays for implements and materials and to relatively low paid personnel. Had the program been designed from the beginning to contribute a maximum to employment it would quite certainly have emphasized much more the making of payments directly to farmers for a conservation job actually accomplished coupling this with the provision of cheap materials such as lime and phosphate since so much of conservation is accomplished if the soil is able quickly to reclothe itself after being cultivated.

In all the above there is no intention of denying that the farm program of the thirties made some contributions to recovery. The point is made that the design of the program was such that it failed by a wide margin indeed of making a maximum contribution and that, from an expansionist viewpoint, is the critical matter.[8]

Efficiency and Security

Depressions wipe out the concern for efficiency in production and, shaped as it was in a depression period, the agricultural program reflects the fact. On the other hand, fear and the desire for some

[8] Nourse, Davis, and Black in their book, Three Years of the Agricultural Adjustment Administration, take up in Chapter XIV, "Contribution to General Economic Recovery," the matter of the stimulus to employment provided by the outlays under the program. They are content, however, to assure themselves and the public that some contribution was made and they nowhere ask the question: "Was such a contribution a maximum?"

Black in his recent book, Parity, Parity, Parity, discusses parity as a bargaining device for the distribution of income as between labor, capital and agriculture but nowhere that I have been able to discover takes up the issue of what the level of income to be divided should be. Black's book, as has been true of so many recently, was written from the viewpoint of the defenses that may be thrown up against depression and not from the viewpoint of a positive program to achieve and maintain expansion.

sort of security are obsessions during depressions and the program equally faithfully reflects that fact. Its designers made constant use of the phrase "acute economic emergency" and other fear arousing formulae which had the effect of still further unbalancing the concern over efficiency and security.

Two further facts of the background of agricultural adjustment contributed to the design of the program. All during the twenties there had been agitation for agricultural relief culminating in the enactment of the Agricultural Marketing Act of the Hoover Administration. The agricultural problem of that decade was one of independent standing based upon much reduced foreign markets and excessively inflated values of farm real estate. Business and industry during the twenties boomed and there was, therefore, no tendency to associate the fortunes of these two and agriculture so that the farm problem was indeed an independent one. Mental inertia carried over this picture of the problems of agriculture into the thirties and the farm problem at the time of the inauguration of Roosevelt was not apprehended as resulting largely from the collapse of business and employment but continued to be regarded as a separate factor. To be sure much was made of the point that business and agriculture were mutually interdependent but the purpose of this effort was to drum up political support for independent agricultural programs and did not constitute a genuine attempt to get before the public the real nature of the crisis.[9]

In fact, the problem of agriculture in the early thirties was 80 to 90 per cent because of the collapse of industry and employment and the consequent reduction in demand. The other 10 to 20 per cent was the persisting hang-over from the twenties of reduced foreign demand and inflated real estate values. The literature of the period gives on the other hand the impression that the farm problem was 75 to 90 per cent overextended production, excessive supplies, and price disparities. The program devised, therefore, was to restore parity and adjust (reduce) farm production with a very secondary objective of contributing to general recovery. It is not now difficult to understand that the orientation of the program should have been the exact contrary with the agricultural program auxiliary to programs for general restoration of employment and

[9] See, for instance, the Economic Bases for the Agricultural Adjustment Act by M. J. B. Ezekiel, and L. H. Bean, U. S. Govt. Printing Office, 1933, and other relevant writings of the period.

investment instead of clumsily attempting to supply the leaven for that restoration itself.

The program accomplished little for general recovery and had the effect also of giving rise to those economic freaks that emphasize its unbalanced view of efficiency and security. Subsistence homesteads, production for home use, killing pigs, plowing up cotton, all came out of the same kettle and left the farmers with the feeling that inefficiency was the effective rule of the day. As the program went on, it intrenched inefficiency still further in its crop control program, with historical bases giving the advantage to farmers whose systems in the past had been most profligate and by the encouragement that it gave to farm pressure groups to obtain by political pressure what they had formerly sought by production efficiency.

The program had the effect also of submerging the drives for agricultural efficiency of a long time nature. Farm income is low relative to nonfarm because of three major reasons. First, rural birth rates and fertility rates are higher than the urban so that agriculture is persistently troubled by an oversupply of workers that at times move too tardily to town. Second, rural schools being what they are the farm population has much less average educational achievement so that a great share of its workers are on the unskilled level and, third, the farm population contains an undue proportion of colored people who suffer a great range of disadvantages: educational, health, status, etc., which keeps the great bulk of them from any prospect but that of the very lowest of incomes.

An expansionist program designed with these matters in mind would have differed from the present program in two major respects. First, it would have geared itself to a program of employment stimulation as far as its shorter period aspects were concerned. Second, it would have sought parity; not price but income parity, by adopting long period programs for the rectification of the disparities which underlie all low agricultural incomes. Agricultural education and the rural school would have come in for a major share of attention under such a program. Actually the thirties found concern over the rural school almost completely submerged by "parity and adjustment."

The depth and persistence of the "parity and adjustment" ideas is illustrated again in the report of the President's Committee on Tenancy. This report went over the now familiar grounds of agri-

cultural price and income disparities coming no closer than earlier reports to the recognition of the level of employment as a governing factor. The design of the program of the Farm Security Administration was forged from the same background as other adjustment programs and has the same overemphasis on security, the same unconcern for efficiency and the same lack of orientation to the expansionist ideal. The program of this agency is to ameliorate agricultural poverty in place which is the essence of the outlook that seeks adjustment to depression or stagnancy.

Unquestionably those responsible for both design and operation of the program felt keenly its limitations. Unquestionably also they felt impelled to give to the program its design because there did not exist for the nation as a whole a program of expansion to which to align that of the Farm Security Administration. One cannot, therefore, regret the program nor deny the immense accomplishment that must be placed to its credit. One can, however, regret most pointedly the situation that made the adoption of such a program a virtual necessity and the results in agricultural inefficiency for which it as well as other parts of the adjustment program must accept a share of responsibility. At the end of a decade of the most intensive effort ever made for agriculture, farm efficiency and the condition of the farm plant was at a low ebb. According to a recent study by Ellickson and Brewster only 1,370,000 of the nation's farms in 1940 could be counted genuinely efficient (eligible to be classified as large scale and adequate), while 2,700,000 were marginal or inadequate.[10]

Both farming and the nation as a whole lost by the process of adjustment as it was carried on in the thirties. Because the nation lacked an effective program for the expansion of employment a back-to-the-land movement developed and this meant an increase in the farm population at just the time when per capita farm incomes were lowest relative to nonfarm incomes. Part of the attempts of the government to raise farm incomes were nullified, therefore, by the increase in the number of farmers. At the same time the larger farm labor force tended to drive farm production upward making the goal of parity prices still more difficult to attain. Worse still most landward migrants went to areas of poor land; that

[10] See Man Power and the Farm Plant, *Land Policy Review*, May 1942. The nation had in 1940 a total of 6,000,000 farms but 2,000,000 of these were classified by Ellickson and Brewster as not bona fide farm units.

is, to areas where their labor could be employed to least effect. It was this movement that contributed most to the disproportionate number of marginal and inadequate farms that Ellickson and Brewster found in 1940.

The return to the land was for a large number of the migrants a temporary expedient since many again returned to urban occupations in defense and later war industries. This back-to-the-city movement has, furthermore, been greatest from those areas of poor lands to which there had been the greatest movement during the depression. An expansionist economy calls for a quite different distribution of labor and the regrettable matter is that some program could not have been found for these back-to-the-landers in the thirties that would have kept them in urban occupations and improving their skill so as to be better able to contribute to production in the present emergency.

No program of the period reflected more clearly the preconception of the independent status of farm problems and the approach of internal adjustment than that of State and Local Planning in the Bureau of Agricultural Economics. Here was an agency well manned and filled with idealism and ambition but unable to effectuate its program in any large measure because of the failure of the larger program, of which it was a part, to be integrated with expansion. Most problems of land use and population adjustment depend for their solution, unless there is to be only adjustment to stagnation, on there being some alternative employment available. Farmers rightly were indifferent to plans that had little of the sparkle of higher incomes and greater efficiency for motivation. So little efficiency could be achieved by mere adjustment within farming in a period when farming was one of the most stagnant of all industries and this fact persistently frustrated the efforts of a potentially fine agency and one that could have given a splendid account of itself if it had been attached to a quite different general program. The successor of this agency deserves the right to show what can be accomplished in State and Local Planning as a part of an expansionist program and this dicta applies equally well to the Farm Security Administration.

Outlines of a Program Integrated With the Expansionist Ideal

The things to regret about the program for agriculture of the

thirties are its parity and adjustment orientation. This orientation is to be traced directly to the failure of the nation at large to provide a program of expansion with which the farm program could be firmly integrated. Perhaps in the absence of a dependable expansionist program the best that could be done for agriculture was to dip as deeply into the public treasury as the politics of the day permitted. The results of adjusting to depression and stagnancy have been very close to demoralizing, however, and the achievements of the major aspects of the farm program nothing to which the nation may now point with pride.

The evolution of the program undoubtedly improved it so that it is fair to say that the modifications of "parity and adjustment" were more laudable than the original. The stamp plan for the distribution of surplus food and to improve diets of low income consumers and the school lunch and low cost milk plans are in the direction of expanding the demand for farm products in a manner that meets the nation's approval. Certainly the stores of feed grains and wheat built up under the ever-normal granary program have now proved an unexpectedly valuable asset. Furthermore, the growing emphasis on conservation in the later years of the program is something to build upon.

However, the strong bias of the program toward the parity and adjustment ends is still apparent so that it is still driven by the negative end of a defense against depression rather than the positive end of expansion. Parity will be an even more crippled goal after the changes brought about by the war have transpired and the program after the emergency is over is going to need new purposes and new goals based upon criteria of social and economic progress that lean less heavily upon measures of price. The thirties being what they were, the new purpose is likely to be expansion and the new goal full employment.

The National Resources Planning Board is working to establish such goals for the economy and states in its recent publication *Post War Agenda:* "Our people do not intend to let an economic depression, unemployment and 'scarcity in the midst of plenty' ever again threaten our growing standard of living or our economic security. If we can have full employment for war, we can also have it for peace. . . . We can maintain a high national income, and we propose to do so. . . . We are not content merely to *defend* our economy against a post-war depression and unemployment."

Achieving full employment in peace times would indeed be a momentous accomplishment and one that is going to require time. Assuming a strongly motivated drive in the direction of that goal what changes in the program for agriculture can be suggested in advance to put it in more nearly full harmony with the greater national objective?

To begin with the parity price objectives should be dropped. Price disadvantages for agriculture when employment is full should be small and the income disadvantages attendant thereto would then merely be the indicators of the faulty distribution of labor and resources. The income disparities of farmers would serve to indicate (1) how great a reduction in the number of farmers and the acreage of land in farms was needed and (2) the locations from which farming should be withdrawn. A clear determination of what the proper allocation of man power and resources should be is almost impossible when the economy is gyrating from prosperity to depression and back. With employment more stable that element of confusion would be gone.

A clearer picture of the long time problems of agriculture would then emerge and the major agricultural program should be developed about improving farm efficiency. Mostly this would consist of taking up again the programs that were so badly submerged during the thirties of improving rural schools, and probably devising new systems of vocational training that will prepare people for migration to other industries from areas submarginal for agriculture. Another aspect of the educational program should be to prepare farmers themselves for better accomplishment in their own profession. The science of farming has far outstripped, since the advent of the Land Grant Colleges, farm practices so that it is only proper to say now that the adequately prepared farmer needs about as much training as is needed in other professions.

Another long term program should center about the improvement of rural health and another about the improvement of living on the farm and particularly farm housing. A farm housing program of somewhat the magnitude of the present parity and adjustment programs will be needed to raise the level of comfort in rural homes to the average now enjoyed in the larger cities. Quite as important should be the long term program for conservation, restoration and improvement of soil resources. The entire program of conservation needs to be reworked to be brought into better

balance than at present,[11] but a conservation program can be fitted into an expansionist program with great long term profit to the economy.

Finally the balance that will be struck as between private and public investment in the achievement of full employment is likely to be in the direction of a far larger scope for fiscal policy as stated in the early paragraphs of this paper. The program for agriculture should and certainly will receive its share of these funds. The criteria for judging the effectiveness of the use of such funds should be quite different from those employed at present. There are three criteria of major importance: Do such expenditures contribute a maximum to the achievement of (1) full employment (2) of agricultural efficiency including the improvement of rural education, health, culture, and living on the farm or (3) to the conservation, restoration and improvement of natural resources.

[11] I have taken up this point at some length in an article on Society and Conservation, JOURNAL OF FARM ECONOMICS, Feb. 1942.

INDUSTRIAL WAGE POLICIES AND FARM PRICE PARITY

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THE PAST ten years have witnessed an unprecedented effort to raise the money incomes of farm operators and industrial workers by government action. The wage structure has been raised both directly by legislation concerning minimum wage standards and payment of overtime and indirectly by encouraging union organization and collective bargaining. Farm prices have been raised by controlling production, by stimulating demand through subsidies to consumption, and by supporting prices through crop loans and government purchases of farm products. Farmers' incomes have been further increased by soil conservation payments and other cash subsidies.

Are these two lines of policy complementary or contradictory? Do proportionate increases in the money incomes of workers and farmers cancel out, leaving each group in the same relative position as before? This suggests the more fundamental question whether the economic interests of workers and farmers are basically opposed. Is the main economic interest of the farmer to make food more expensive to the worker? Is the economic interest of the worker to raise prices of goods and services to consumers, including farmers, as a prerequisite to higher wages and improved working conditions?

The answer to these questions is of major political importance. If a basic cleavage of interest exists between the two largest groups in the population, we must look forward to severe political tensions in the future. Attempts to unite workers and farmers in support of a progressive political program must be continually frustrated if common economic interests do not provide a solid basis for political cooperation.

I

The likelihood of political harmony is clearly greatest when real national income is expanding rapidly. Under these conditions both workers and farmers may increase their real incomes without loss to any other economic group. As full employment is approached, the rate of expansion of national income necessarily decreases, and conflict over the distribution of income is then likely to increase.

In the United States under peacetime conditions, however, full employment would make possible such a high general level of incomes that there would be little danger of acute controversy.

The proposition that a rising real national income *makes possible* simultaneous expansion of the real income of workers and farmers is easily confused with a quite different proposition, *viz.*, that an increase in money wage rates or farm prices will *initiate* a rise in real national income. Those who assert a general identity of economic interest between farmers and workers frequently rest their case on this type of purchasing power argument. It is difficult if not impossible to secure satisfactory statistical evidence on the subject.[1] On *a priori* grounds it seems doubtful whether wage and price increases do much either to promote or retard an expansion of employment. Their main effect is probably on the distribution of real national income rather than on its size.

If national income is not rising, it is still possible to increase the real income of farmers without reducing that of workers, and *vice versa*, provided income can be transferred from other economic groups. A reduction in distributors' margins on farm products, whether accomplished by economies in distribution or lower profits, will permit either an equivalent increase in farm prices or a smaller increase in farm prices and a reduction of retail prices from which workers would benefit.[2] Wage rates may sometimes be increased at the expense of profits, with no effect on prices or output either in the short or long run. This involves no loss to farmers and may even benefit them if the redistribution of income from owners to workers produces a shift of demand toward foodstuffs. Real income may be transferred to farmers and wage earners from salaried people through a general increase in prices and wage rates with a less than proportionate increase in salary levels.

The "squeezability" of owners, middlemen, and salaried people

[1] The best evidence is probably from the period 1933–35 in the United States. Some students of this period have concluded that the entire expansion of employment can be accounted for by the devaluation of the currency, the budgetary deficits, and other measures of fiscal policy. But the efforts to raise wage rates and farm prices may also have had a favorable effect on employment. On the other hand, they may have had an unfavorable effect which was more than offset by the effect of fiscal policies.

[2] Economies in distribution may reduce employment opportunities for particular groups of workers. Proposals for pooled delivery of milk, for example, have been opposed by some locals of the Teamsters' Union because of the probable displacement of labor. A policy which is in the interest of both workers and farmers in general may easily be against the interest of a particular group of workers or farmers.

at a given time is a matter of great practical importance. The greater the possibilities of increasing workers' and farmers' incomes by this means, the less is the likelihood of a direct conflict of interest between them. I would hazard a judgment that in the late 'thirties the volume of income payments not required to induce the performance of necessary economic functions and therefore available for redistribution was still large, though probably a good deal smaller than during the 'twenties.

A gain to farmers which comes out of an expansion of national income or out of income transferred from a third party does not involve an actual loss of income to workers, and *vice versa*. But it does involve a potential loss, since what one group has gained the other cannot. There is thus a latent conflict of interest over the division of the gain. A reduction in food distributors' margins may go largely into reduced retail prices, or largely into higher farm prices. The result most beneficial to farmers will not be most beneficial to workers. Where salaried people and recipients of fixed incomes are exploited through inflation, the distribution of the gains between farmers and workers will depend on the relative rate of increase in net farm income and wage rates. While both groups may gain, workers would stand to gain more if farm prices rose less and *vice versa*.

A similar conflict of interest exists between particular groups of farmers and farmers in general, and between particular groups of workers and workers in general. Where a firm is enjoying monopoly profits it is to the interest of workers employed by the firm that these profits be absorbed through higher wages, while other workers might prefer to see prices lowered. Again, where workers as a group gain in real income through a general rise of money wage rates, a disproportionate share of the gain will go to those workers whose rates have advanced most rapidly.

These conflicts, however, are not likely to arouse serious antagonism and may pass almost unnoticed. When a man's real income is constant or increasing, he is not likely to be seriously disturbed by foregoing additional income which he might have received, particularly if he is not sufficiently well informed to appreciate his loss.

The worker's gain must be the farmer's loss, and *vice versa*, only if real national income is stationary or declining, and if the possibilities of transferring income from other groups have been fully

exploited. This second condition comes to the same thing as assuming third parties absent and the produce of industrial labor exchanged directly for farm produce. Under these conditions, an increase in farm prices—which would of course have to be accompanied by control of output—would cause a transference of real income from wage-earners to farmers, a smaller output of farm products, and a larger output of industrial products.[3] An increase of industrial wages would cause a transference of real income in the opposite direction, not only by raising the prices which farmers must pay for goods but probably also by raising the wages of farm labor.[4]

Either the industrial or agricultural group, by combining to raise its prices—or to maintain its prices in the face of increased efficiency and lower production costs—could shift the terms of trade against the other and secure more of the other's produce for less of its own. If both sides were completely organized, the terms of trade would be decided by their relative bargaining ability and political strength. Exactly proportionate increases in farm prices, wage rates, and industrial prices would of course cancel out, leaving everyone with the same real income as before.

The danger of economic and political conflict would be intensified by the difference of interest which exists *within* labor and *within* agriculture among producers of different commodities. Workers and employers in a particular industry, by combining to raise prices and wages, can profit at the expense of other workers and employers as well as of farmers. If this were the only way of increasing one's real income, basic unity of economic and political objectives would be impossible, not only as between workers and farmers, but as between shoe workers and automobile workers, livestock growers and wheat growers. Economic life would become a true *bellum omnium contra omnes*, with common interests lost in

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[3] It is assumed that a general increase in wage rates and industrial prices, or in farm prices, could occur without an appreciable effect on total output and employment. This requires a number of supporting assumptions, including a perfectly expansible money supply.

[4] Little attention has been paid to farm labor in this discussion because the difference in economic interest between farm workers and farm operators is fairly clear. The relation between the interest of farm operators and industrial workers is more complicated and has therefore been developed at some length. As a practical matter, however, the fact that most farmers are also employers of labor and that some farmers are large employers has an important influence on their attitude toward industrial wage rates and trade union organization.

the struggle of particular groups for positions of strategic advantage.

Under these conditions, the possibility of economic civil war could be averted only by imperfect organization of some economic interest groups. The presence of some "weak nations" in the economy leads to an inequitable distribution of income but serves also to reduce strife. The notion of harmony of interest which pervades classical economic writing is based essentially on complete absence of organization for economic aggression.[5] The trend of events, however, is not merely toward stronger organization of farmers, workers, and business men, but toward organization along commodity lines. This tendency is already very marked in such industries as building construction and milk. A producers' cooperative in a particular milkshed may drive a hard bargain with the distributors' association, but in defending the structure of milk prices to consumers they are likely to stand together and to be joined by the delivery-men's union. Similarly, a local Building Trades Council may quite reasonably conclude that it stands to make larger immediate gains from the success of the local contractors' association than from the successful organization of textile workers.

To sum up this part of the analysis: A policy of simultaneously increasing the real income of farmers and workers can be permanently successful only if accompanied by other policies designed to ensure a continuous expansion of national income. Such a policy may for a time succeed by transferring income from middlemen and other third parties. When the possibilities in this direction have been exhausted, however, further gains by one group must be at the expense of the other unless national income is increased. A stationary national income is therefore dangerous to political stability, while a declining national income is bound to produce intense conflict as each economic group attempts to shift the incidence of the decline to the remainder. This disintegrating effect of a declining total income is felt *within* labor, agriculture, and business as well as between them. Each business concern, each group of

[5] In other respects, the assumptions of classical theory are very similar to those used here—stationary or gradually rising output, absence of any monopoly income available for transference (except for short periods), and unimportance of price changes for the general level of output and employment. It is significant that these assumptions, when divorced from the additional classical assumption of free competition, lead not to economic harmony but to extreme economic and political tension.

workers, each individual seeks to save himself by his own action, and belief in the feasibility and value of united action disappears.

II

The favorable condition of an expanding national income has been present in every year save one since 1932. Workers and farmers have been able, not merely to increase their real incomes simultaneously, but to increase them more rapidly than national income has risen. Between 1932 and 1940, net farm income tripled, other entrepreneurial withdrawals doubled, payments to wage and salary earners increased by about 60 percent, and interest and dividend payments increased by only 13 percent. As a proportion of total income payments, net farm income increased from 3.1 to 5.7 percent, labor income increased from 69.1 to 69.6 percent, while income from interest and dividends decreased from 17.6 to 12.3 percent.[6]

TABLE 1. INCOME PAYMENTS TO INDIVIDUALS, 1932, 1940, AND 1942 (IN MILLIONS)

	Total income payments	Salaries, wages, relief and other labor income	Dividends and interest	Entrepreneurial income (non-farm) and net rents	Net farm income
	1	2	3	3	5
1932	47,414	32,739	8,355	4,832	1,488
1940	76,456	53,195	9,421	9,478	4,362
1942	114,250	82,817	9,573	12,610	9,250
			Per cent		
1932	100.0	69.1	17.6	10.2	3.1
1940	100.0	69.6	12.3	12.4	5.7
1942	100.0	72.2	8.3	11.5	8.0

Careful study would be necessary to determine even approximately how far the altered distribution of income payments in 1940 was due to government wage and price policies rather than to the mere fact of general economy recovery. Farm prices usually rise sharply during a recovery period and, since the costs of farming are very largely overhead, this produces a much larger percentage

[6] See Table I, which is based on data provided by the National Income unit of the Department of Commerce. Figures for 1942 are preliminary estimates. The increase of net farm income was due primarily to an increase of 40 percent in the wholesale price of farm products; farm output increased only 15 percent between 1932 and 1940. The increase in payment to wage and salary earners, on the other hand, was due primarily to an increase of perhaps one-third in man-hours worked, secondarily to the rapid advance of hourly earnings between 1933 and 1940, and in lesser measure to an increase of other labor income (mainly social security benefits) from 1.6 billion dollars in 1932 to 3.0 billion in 1940.

increase in net farm income. Such a large increase, however, is unusual and a considerable part of it can certainly be attributed to the government's agricultural program. Labor income would probably decline percentage-wise in a normal recovery period. The fact that it increased in this case is certainly due partly to the government's wage policies, the rapid growth of collective bargaining, and the large increase in relief and social security payments. Government policy, in short, seems to have had its intended effect of giving farmers and wage-earners a larger share of the increase in national income than they would otherwise have secured.

From 1940 through 1942, the trends of the previous eight years continued at an accelerated rate. Net farm income more than doubled, labor income increased by 60 percent,[7] entrepreneurial withdrawals increased by 33 percent, and dividend and interest payments increased by less than 2 percent.[8] These developments were partly inherent in the very rapid expansion of employment during the period and the inflationary effect of growing budget deficits. But they were also due partly to price and wage policy. Strong measures to restrain the general advance of farm prices and industrial wage rates were not taken until October 1942, although price ceilings had been imposed on most products in May 1942, and on some products as early as the spring of 1941. The wisdom of this policy is not at issue here. Its result was a further transfer of real income from salaried poeple and recipients of property income to farm operators and wage earners.

The main objective of farm price and industrial wage policies for the duration of the war should be to provide the maximum incentive to essential production. Farm prices should be adequate to induce farmers to meet production goals. The wage structure should be so adjusted as to facilitate more direct methods of manpower allocation and to call forth maximum labor effort. Wage increases which are desirable for manpower reasons should not be

[7] The increase in net farm income was again due mainly to an advance of 50 percent in wholesale prices, though farm output also increased by 15 percent. The increase in labor income was probably due about equally to increased employment and higher wage rates. Since existing wage statistics relate almost entirely to average hourly earnings the extent of wage increases cannot be definitely determined. The increase in wage rates in durable goods manufacturing between June 1940, and December 1942, was probably in the neighborhood of 20 percent.

[8] Corporate profits and reserves increased greatly, however, and large dividend payments may be made from reserves after the war. To this extent dividend recipients are better off than they appear and are merely being forced to save part of their incomes for the time being.

withheld solely on the ground that they may interfere with other desirable objectives, such as enforcement of price ceilings. Any practicable wage policy will result in more money being distributed than there are goods available, and this excess money income can probably not be drained off entirely by taxation and voluntary savings. It is unlikely, however, that the volume of additional wage payments necessary to iron out the most serious maladjustments in local or regional wage structures would seriously reduce the effectiveness of the enforcement machinery of the Office of Price Administration.

A second and related objective should be an equitable distribution of unrationed consumer goods and services and of rights to post-war consumption. Necessities will be distributed increasingly through the rationing system and money income above that necessary to buy the ration allowance will be of no avail. Distribution of unrationed necessities, however, and of almost all comforts and conveniences, will continue to depend on the distribution of money income.[9] The distribution of titles to the national debt will also be strongly influenced by the distribution of money income. If one assumes that the enforcement of price ceilings is completely effective and that most necessities are rationed, the main effect of an increase in workers' incomes might be to permit them to buy a larger share of the national debt. A wage increase is therefore beneficial to workers even under conditions of general scarcity of goods. Whether it is desirable is a separate question which should be decided largely by the extent to which it contributes to the two objectives set forth above.

Our present policy is not strictly speaking one of stabilization, but rather of controlled increases in wages and farm prices. The Economic Stabilization Act provides that farm price ceilings may not be set below parity or, unless necessary to correct gross inequities, below the highest market price between January 1 and September 15, 1942. Farm prices which were continuously below parity during this period are thus allowed to rise to the parity level. On December 15, 1942, wheat stood at 81 percent of parity, oats 77 percent, barley 65 percent, rye 50 percent, hay 57 percent. If all of

[9] This assumes that members of different income groups will be equally agile in scrambling for scarce goods at retail, and that actual purchases will therefore form about the same percentage of potential purchases for each group. Under these conditions, an increase in money income would mean a *proportionate*, though not an *equal*, increase in consumption.

these prices were to rise to parity, the cost of living would be increased by several percent. This is not likely to happen in the immediate future, however, since the most important crops below parity are cereals whose supply is abundant relative to the prospective demand.

Parity prices, designed originally as objectives toward which prices were to be raised, are quite unsuited for use as actual price ceilings. Based on price relationships in the period 1909–14, they fail to take account of trends in production costs of different farm products since that time, and also of the differing proportions of input factors used in different types of farm enterprise. Parity prices thus bear no close relation to present production costs. The parity price for wheat is probably higher than is necessary to call forth sufficient production, while the parity price for beef would be quite inadequate for this purpose.[10] It might be desirable to abandon the parity concept altogether for the duration, and to set farm price ceilings on the basis of the price necessary to call forth a given volume of production. This would open the way, however, to pricing based on hypothetical production costs, which can be made as large as desired by increasing the "cost" of the farmer's labor and capital. The result might be prices much higher than those arrived at under the parity formula.

There will be severe pressure during 1943 to raise farm prices above the level permitted by the Economic Stabilization Act, either by raising the percentage of parity permitted or by recalculating the parity formula. It will be argued, among other things, that the rapid advance of farm wage rates during 1942 and the additional increases which will be necessary in 1943 and 1944 to retain an adequate farm labor supply make price increases imperative.[11] It should be noted in this connection that wages paid to

[10] For these reasons the method of computing parity prices should be drastically revised if the concept continues to be used in the post-war period. Parity should be defined in terms of net income, ideally on a farm-unit basis, but as a practical matter probably on an individual commodity basis, using cost rates weighted according to the relative importance of input factors used in producing that commodity.

[11] During 1942 average daily farm wages without board were about one-third of the average daily earnings of factory workers. On an hourly basis, average farm wages are still well below 30 cents per hour. (U. S. Department of Agriculture, Farm Security Administration: Statement on the Regulation of Farm Wages, November 18, 1942, p. 27.)

Wage adjustments alone will of course not ensure an adequate farm labor supply. Other measures, including organized placement of seasonal farm workers, shifting of farmers from subsistence farms to commercial farms, recruitment of town and city residents for temporary work at seasonal peaks, importation of Mexican and

hired labor formed only 8.3 percent of gross farm income and 15.3 percent of net farm income in 1942.[12] If farm wage rates were doubled, farm prices remaining unchanged, net farm income would still be larger than in any year since 1919. While price adjustments on particular farm products may prove necessary, it would seem difficult to justify any general advance above the levels permitted by the Economic Stabilization Act.

A good case can be made for including farm wages as a cost factor in the parity formula, provided this is a permanent change rather than a device for increasing parity for the time being.[13] It has been argued that this would reduce farmers' opposition to higher wages, since higher wages would automatically increase parity prices. The strength of this argument depends partly on the weight given to wage rates in the parity formula. If wage costs were weighted according to the proportion which payments to hired labor form of total farm costs, wage increases would be exactly offset by price increases, leaving net farm income unchanged. Farmers could profit from higher wages only if wage rates were weighted on a basis of hired plus family labor. This would be true, moreover, only if farmers were assured of receiving parity prices at all times. Unless such a guarantee can be given, it may be doubted whether farmers will consider a hypothetical increase in their future returns as the equivalent of a clearly visible increase in out-of-pocket costs.

Hourly earnings of wage earners will continue to rise in 1943 and 1944 in three main ways. First, wage rates of many workers have not risen since January 1, 1941, by the 15 percent permitted under the maladjustment provision of the National War Labor Board's wage policy. While the Board has never stated that the full 15 percent increase will be allowed in all cases, it appears to regard wage increases up to this level as reasonable *prima facie*. General application of this provision would permit sizeable increases for many

other foreign agricultural workers, and deferment of skilled farm workers from military service, will be necessary. But these measures can probably not succeed without some reduction of the differential between farm and industrial wage rates.

[12] Department of Agriculture, op. cit. p. 30.

[13] From 1921 through 1940, addition of farm wage rates to the parity formula would have reduced parity prices. By December, 1942, however, farm wage rates had increased sufficiently that they would have raised the parity index by 4 percent if weighted on the basis of hired labor only and by 12 percent if weighted on the basis of hired and family labor. If farm wage rates collapse after this war as they did in 1921, their continued inclusion in the parity formula would probably reduce parity once more.

workers, particularly in non-manufacturing industries. The provision is based on the fact that the cost of living increased by 15 percent between January, 1941, and May, 1942, when the President's seven-point stabilization program was announced. By December 1942, the cost of living had risen by 19 percent over January, 1941. If living costs continue to increase, there will probably be considerable pressure from labor to revise the Board's formula upward. Because of the shrinking supply of consumer goods, such revision would not fulfil the ordinary purpose of a cost-of-living adjustment, *viz.*, to enable labor to enjoy the same real income despite a rising price level. It would, however, as pointed out above, enable workers to secure a larger share of unrationed goods and services and of titles to national debt than they would otherwise receive.

Second, a considerable number of wage adjustments will be necessary to induce workers to move to or remain in essential jobs. Wage adjustments cannot of course be used as the main instrument of manpower allocation. In a situation of severe labor shortage, this could lead only to an endless upward spiral of wages. The National War Labor Board doubtless had this danger in mind when it stated that "the Board will not approve wage increases for the purpose of influencing or directing the flow of manpower."[14] But wage adjustments will be necessary in particular cases to supplement direct methods of manpower allocation. Wage rates in some plants, and even in entire industries, are sufficiently out of line with wages paid for comparable work elsewhere that it would be impracticable to ask workers to stay in these jobs without an increase in wages.

Third, hours of work will be considerably lengthened. Under existing laws and union rules concerning payment of overtime this will probably produce a rise of 5 percent or more in average hourly earnings during 1943.

The total increase in average hourly earnings during 1943 may be in the neighborhood of 10 percent, and farm prices may perhaps increase by about the same percentage. These increases will of course interact on each other. Wage increases, to the extent that they push up price ceilings on industrial products. will raise parity prices and therefore ceiling prices on farm products. In addition,

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[14] Wage Stabilization Policy of the National War Labor Board, November 6, 1942, Section 4.

higher wages in industry will tend to raise farm wage rates and thus strengthen the argument for revising the basis of farm price ceilings. Higher farm prices will tend to raise the prices of all goods fabricated from farm products and will also, by raising food costs, furnish an argument for additional wage increases. The amplitude of successive turns around this apiral may be expected to diminish, both because wages and farm prices are only a part of business costs and because there is probably still some room for cost-absorption by business firms. Continuous effort will be necessary, however, to limit wage and price increases to those cases in which they are clearly necessary for production reasons. It is also essential that price and wage controls be reinforced by extensive rationing of necessities and by vigorous efforts to drain off surplus income in the hands of consumers.

III

Looking toward the post-war situation, the interests of farmers and wage-earners can be reconciled only in a program which gives some assurance of continued full employment. Farmers and workers can doubtless agree on subsidiary issues—redistribution of income through taxation, reduction of distribution costs and monopoly profits, programs of social insurance, housing, and power development which benefit both farm and city dwellers. But without stability of employment at a high level, these points of agreement are likely to be lost in a welter of conflict over the distribution of a shrinking national income.

It may be argued that if something like full employment is attained, programs to support the incomes of farmers and wage-earners will become unnecessary. This argument is convincing only on the assumption of a completely competitive economy. In an economy in which some groups have organized to increase their share of the national income, all other economic groups must organize to ensure equitable results. The only alternative to exploitation of the weak by the strong or arbitrary distribution of income by an all-powerful government lies in the interplay of organized economic interests, adjusted and balanced by democratic processes. The "pressure group" is as fundamental to modern economic analysis as the isolated "economic man" was to nineteenth century thought. The art of political economy in modern times consists essentially in uniting organized economic interests in support of

programs which promote expansion rather than restriction of national income.

DISCUSSION BY JOHN D. BLACK

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Dr. Reynold's paper is a good qualitative discussion of the relation between industrial wages and farm incomes. Only very minor exceptions can be taken to any of the statements, and none of the important factors in the problem has been omitted. The discussion would have been improved, however, if more in the way of the specific and concrete had been introduced: a few more facts and a little less speculation.

A detailed examination of the hours of industrial wages and farm incomes from 1910 to 1940 throws more emphasis on employment and unemployment as a factor in farm incomes, and less on industrial wages as such, than is suggested by Dr. Reynold's discussion. In two short periods, 1922–25 and 1932–37, agriculture was increasing its per capita share of income relative to industrial wages; and in both of these periods, industrial employment was on the make except just at the start.[1] In 1925–29 and 1937–40, labor was probably actually gaining at agriculture's disadvantage.

Stronger accent should also be given to the manner in which improvements in the arts that lower the cost of production of industrial goods are at times passed on to farmers—and other users—in lower prices, as happened with automobiles and tires in the 20's; but at other times are largely if not wholly absorbed in higher wages and profits. The decade of the 20's illustrates this best, with output per worker in industry increasing 65 per cent, and prices of farm machinery, fertilizer, farm building materials, equipment and supplies, and of all commodities bought by farmers generally, showing no decline and even rising a little in some cases.

The spectacular decline in interest rates on loans, and in related returns to invested capital, in the decade of the 30's, is a larger factor than often realized in the failure of capital to share in the national income in 1935–39 to the extent that it did in 1925–29.[2]

In the whole period from 1920 to 1940, returns per worker in agriculture failed notably to keep up with returns per person in the non-farm population. Since 1940 the course of change has been reversed, as it was in 1916 to 1918. By 1920, industrial returns were on top again. Will this war-end see a similar pattern of change? Several factors in the situation forecast significant differences, perhaps even a repetition of the pattern of the post-Spanish-American War period.

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[1] For a fuller discussion, see *Land Policy Review*, June 1942, "Wages and Earnings."

[2] See Charts I, IV, and V in Chapter VIII of Parity, Parity, Parity, by J. D. Black.

RESOURCES AVAILABLE FOR AGRICULTURAL PRODUCTION IN 1943[1]

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THE need for careful husbanding of our agricultural resources is greater today than at any time since the Pilgrims fought to maintain their foothold on the somewhat barren shores of Cape Cod and Massachusetts Bay. Then, as now, the food demands of the economy were greater than available supplies. In scale of operations, however, there is no comparison between the fish, maize, and roots of that time and the tremendous volume of a wide variety of agricultural commodities that we grow today. Unfortunately, though, we no longer have the unlimited possibilities for expansion. In 1943, we shall have about 460 million acres of cropland in use and we can't expect to get much more, particularly in our more important production areas.

Our job, then, is to reconcile the almost insatiable food demands of the United Nations with the productive resources at hand. This reconciliation is goal-making in which we must study the production possibilities of all areas of the country; relate these possibilities to storage, transportation, and processing facilities; balance this production capacity as best we can with civilian, military and Lend-Lease needs; and finally translate national goals thus determined back through State and county distributions to feasible jobs for each farm in the country.

Ideally, this process would equalize marginal returns in terms of wartime food and fiber production. At present, we are far from accomplishing this ideal. Yet, we have certain definite accomplishments to our credit, in addition to a large amount of valuable experience. A substantial part of this credit goes to the farm, county, and State people who cooperated in 1942 to produce what has been called "the most complete capacity estimate ever made of agriculture."[2] This estimate of 1943 production possibilities has pro-

[1] This statement represents the ideas of the authors advanced for discussion purposes and does not necessarily reflect any Bureau or Department viewpoint on the problems considered.

[2] Transmittal memorandum, Agriculture's Wartime Production Capacity, Part I. Washington, D. C., August, 1942. Mimeographed.

vided a large part of the framework in which the 1943 goals have been developed. The importance of this analytical phase of food-production administration cannot be overstressed, and modifications of this capacity estimate will be basic to work on 1944 goals. In essence, capacity estimates of this type reflect the resources that limit agriculture's ability to produce during the war. They also indicate the areas where increases in production of specific products can be made and what shifts will be necessary to achieve the increases. However, even as this year, we must expect that original estimates will be modified considerably during the goal-making process as national policy, priorities for equipment and materials, changes in weather, marketing limitations, and other dynamic factors affect the assumptions under which the original estimates were made.

Although no one part of the production-distribution picture can be independent of the whole, we are most concerned in this paper with the resource base for 1943, and will forego, as much as possible, many important and interesting developments in the field of distribution and international policy.

1943 Production Capacity

The national appraisal of 1943 resources is summarized in the capacity report released by the Department in August 1942.[3] This report estimated total feasible agricultural production in 1943 at 126 per cent of the 1935–39 average (Table 1). While this approximates the level of 1942, an all-time record, it still falls slightly short of the level of production suggested in the 1943 goals (128 per cent). This does not mean that these goals already are beyond our reach. On the contrary, although it is admittedly difficult to surpass the high production levels of 1942, it is not impossible. Goals for farm production in 1943 should be considered military objectives of the first order and should be fought for and held with the same determination that the Russians showed at Moscow and Stalingrad; that the British showed in the dark fall of 1940; that the Chinese have shown in the long years since 1937; and our men have shown at Guadalcanal and Midway. Yes, this is war. We are all expected to do the impossible, because we must.

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[3] *Ibid.*, and individual capacity reports for 48 States. The assumptions with respect to availability of labor and machinery, and the framework of existing programs (including those concerned with prices) tended to restrict the estimates of capacity.

TABLE 1. ACREAGE OR PRODUCTION: 1943 GOALS COMPARED WITH 1943 FEASIBLE ESTIMATE AND 1942 REPORTED

Item	Unit	1942[1]	1943		Goals as per cent of	
			Feasible[2]	Goal[3]	1943 feasible	1942
					Per cent	*Per cent*
Pork (dressed weight)	Million pounds	10,940	12,096	13,800	114	126
Lard	do.	2,500	2,800	3,400	121	136
Beef and veal	do.	9,980	12,096	10,910	90	109
Lamb and mutton	do.	1,060	1,083	990	91	93
Wool shorn	do.	392	405	—	—	
Milk	do.	119,500	123,846	122,000	99	102
Eggs (farm production)	Million dozens	4,012	4,270	4,345	102	108
Chickens liveweight	Million pounds	2,790	3,107	3,096	100	111
Turkeys	do.	530	564	608	108	115
Corn	Thousand acres	91,011	91,708	95,000	104	104
Oats	do.	42,656	39,973	37,300	93	87
Barley	do.	19,433	18,342	18,000	98	93
Grain sorghums, all	do.	9,755	9,963	10,000	104	103
All tame hay[4]	do.	60,211	62,823	59,000	94	98
Wheat	do.	52,533	54,719	52,500	96	100
Rye[4]	do.	3,837	3,787	3,600	95	94
Flaxseed	do.	4,691	4,835	5,000	103	107
Peanuts, nuts and oil[4]	do.	3,690	5,153	5,500	107	149
Soybeans for beans[4]	do.	10,762	11,466	10,500	92	98
Sugar beets	do.	1,049	1,086	1,050	97	100
Sugar cane for sugar and seed[4]	do.	329	340	340	100	103
Rice	do.	1,505	1,477	1,380	93	92
Dry edible beans	do.	2,135	2,456	2,800	114	131
Dry field peas	do.	501	651	665	102	133
Sweet potatoes[4]	do.	707	808	757	94	107
Irish potatoes	do.	2,793	2,967	3,160	106	113
Tomatoes for processing	do.	615	647	675[5]	104	110
Green peas for processing	do.	479	496	500[5]	101	104
Other commercial truck for processing	do.	977	919	973[6]	106	100
Commercial truck for fresh market[4]	do.	1,692	1,674	1,720	103	102
Cotton	do.	23,310	24,223	22,500	93	97
Tobacco[4]						
Flue cured	do.	792	825	841	102	106
Burley	do.	351	366	421	115	120
Other domestic	do.	237	245	272	111	115

[1] Crop and Livestock Estimates, BAE, December, 1942.

[2] Agriculture's Wartime Capacity, BAE, August, 1942.

[3] Tentative Goals, November, 1942. Increased goals for corn, grain sorghums, flaxseed, soybeans, dry beans and peas, Irish potatoes and sweet potatoes, were announced in January, 1943.

[4] Acreage harvested.

[5] Tentative.

[6] Includes estimates for crops for which tentative goals have not been set.

Farmers are being asked to produce a maximum output of food with less labor, less machinery, fencing, fertilizer, insecticides, and containers than were available in 1942. Of course, farmers can't produce without labor and tools any more than the airplane manufacturers can make airplanes without labor and materials of production.

Fortunately for farmers, and for the country, there is a fairly wide margin of elasticity in farm production on family farms, both in the use of labor and machinery. Whether the margin is wide enough to maintain production at present levels is a moot question. Most certainly the job will be hard. But it is difficult to say how much production will be cut down because of a shortage of labor, of machinery, or of any other one production factor. However, an accumulation of shortages in labor, machinery, and other materials is much more serious than a shortage in one factor alone. If machinery were available it could be substituted for labor to a considerable extent, but in the present situation this is not possible. So, the question becomes one of whether there is enough elasticity left for farm operators to maintain production on a high level. To throw more light on that question we need to examine some of the facts with respect to each of our resources, some of the obstacles and some of the ways of overcoming those obstacles.

The real problems of our food war have been slow in assuming critical proportions because we have had good prices, good cooperation, good equipment, excellent weather, and other favorable conditions. Now, the stringencies of war are forcing many serious production problems out into the open. The job ahead is really tough, and we must measure our resources accurately and use them wisely. Much more so than has ever been necessary before.

Our Land Base for 1943

In many respects, land is the least variable of our resources. In 1941, we had slightly over 457 million acres of cropland (Table 2). The goals involve the use of another million acres. Owing to the wide variation in possible uses of this land and the more critical limits on other production factors, it would seem that our land base is the most adequate and least troublesome of our resource problems in 1943.[4]

[4] This is probably not true in much of the range areas where land uses may have already exceeded safe levels of intensity.

Optimism with regard to meeting our land requirements gets much of its support from the constructive steps taken in the past decade to conserve our soil. Many farms have stored up fertility under our national conservation program, and they now offer a backlog that is badly needed in the present emergency. Still more helpful is the widespread knowledge of operating techniques such

TABLE 2. CROPLAND USE IN SPECIFIED PERIODS

Item	1935	1941	1942[1]	1943		Goals as per cent of	
				Feasible[2]	Goal[3]	1943 feasible	1942
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*Per cent*	*Per cent*
Principal intertilled	153,026	148,569	157,012	163,219	164,009	100.5	104
Small grain	127,036	126,708	123,150	121,654	116,400	96	95
All tame hay	55,647	59,317	60,211	62,823	59,000	94	98
Minor crops	28,564	10,983	12,588	12,588	12,588	100	100
Rotation pasture[4]	69,144	111,545	104,627	97,850	106,137	108	101
Total cropland	[5]433,417	457,122	457,588	458,134	458,134	100	100.1

[1] Crop and Livestock Estimates, BAE, December 1942.
[2] Agriculture's Wartime Capacity, BAE, August 1942.
[3] Tentative Goals, November 1942.
[4] Preliminary. Estimates of rotation pasture for 1935, 1941, 1942, and 1943 were obtained by totaling the acreage of all tame hay, principal intertilled crops, small grains, and minor crops, and by deducting the sum thus obtained from the acreage of all cropland. The acreage of cropland is based principally on data from the Agricultural Adjustment Agency. Rotation pasture includes fallow and idle land, except that classified as restoration acreage and the acreage of wild hay, and fruit and nut trees in some States.
[5] Cropland in 1938.

as contour cultivation, cover crops, and terracing that allow more intensive use of land with safety.[5] Many of the soil-building practices that have become more common in recent years will be especially useful in off-setting shortages of fertilizers. Because of past "soil savings," the apparent withdrawals from savings shown in Table 2 can be accomplished safely. Continued good soils management should allow the increase in the proportion of intertilled crops. Actually, most of the increases in intertilled acreage will come on the level lands of the Corn Belt, the eastern Plains, and the many river bottom areas—well within the limits of a safe con-

[5] See, More Food Through Conservation Farming, U.S.D.A. Farmers' Bulletin 1909.

servation policy. There should be no need to plow restoration land in the Plains, or otherwise sacrifice areas being slowly reclaimed from earlier abuses.

Changes in economic conditions affecting farm production favor increases in intertilled acreage. Lands that were definitely submarginal for crop production under the cost-price relationships of the 'thirties, now can be brought back into production.[6] While this theoretical increase in the land base for any particular commodity is applicable to the country as a whole, it is particularly useful in the considerations of individual farms, and of the problems of farmers who must plan their cropland organization to meet the wartime demands for food and fiber. Rents as well as owners' land costs have failed generally to rise as fast as farm product prices. As a matter of fact, present margins on all items except labor favor more intensive operation. The increased price of labor operates in the direction of more labor-extensive use of land wherever hired labor is involved, but even this tendency may be offset by the higher margins on use of the other resources. Thus, where land is a limiting factor, we can expect and recommend more intensive production in 1943.

With proper incentives, our present land base is both physically and economically adequate and is not an effective limit on our expansion of production in 1943. However, shifting price relationships and changes in other factors of production require a careful reexamination of our land use pattern in all areas. There still exists a wide flexibility for increasing the production of individual products within the limits of our present land base. For example, last summer Minnesota reported that a potential increase in hog production of 41 per cent could be obtained if we were willing to increase corn acreage 23 per cent and reduce other feeding operations, small grain acreage, and cash crops.[7]

In 1943, present goals do involve increases in hog production and corn acreage, but to get them the Corn Belt will grow smaller acreages of oats, barley, and soybeans. However, even here our national flexibility is evident in that much of the decrease in soybean acreage in the Corn Belt can be made up by increases in

[6] Providing this does not require large investment for clearing, etc., and with due regard for protection against irreparable damage such as results from breaking of range land in the Plains.

[7] Wartime Farm Production Adjustments in Minnesota, June, 1942. Unpublished report.

North Carolina, Virginia, and the Delta States. Within fats and oils production, we also have many alternatives and can grow peanuts rather than soybeans, make more lard rather than vegetable oils, or butter rather than lard. In all cases, the basic shift is in the use of our land and we are fortunate in having these alternatives. Our major problem becomes the traditional farm management principle of wise selection of alternatives, or, currently obtaining a war-optimum combination of resources.

The Labor Problem

The most serious labor limitation of 1943 will be the shortage of experienced year-round hands, especially those who are familiar with livestock husbandry and farm machinery. Skilled seasonal workers also will be difficult to obtain. Milkers, tractor-drivers, sheep herders, shearers, woodsmen, cow hands, similar skilled workers have been lost to war industry and the armed forces in dangerously large numbers. Isolated areas were badly hit in 1942. Many more areas will suffer in 1943.

The backbone of the farm labor force is made up of those who have an immediate, personal interest in the farm—the operator and his family. Experienced hired workers make up the next most important part. Seasonal workers, who complete the labor picture, were the first to react to the increased opportunities of the war period. From the start, however, the real danger to agricultural production has been the withdrawals of family members and regular hired hands. In spite of recent protective measures, our attention should still be focused on this year-round labor problem.

A recent report by the Bureau of Agricultural Economics,[8] indicates that from July, 1942, to October, 1943, about one and one-half million persons will have to be drawn into agricultural employment to replace workers who will have left the farms. Of these only 250,000 will become available through normal growth in the working age segment of the rural farm population. This report of the Bureau anticipates that all but 200,000 of this loss can be made up by non-working or partly working segments of the present farm population. This appears to present an unduly optimistic picture, but the report makes one outstanding qualification, namely:

"Meeting the needs for agricultural labor in 1943 will require

[8] Manpower in Agriculture for 1943, Bureau of Agricultural Economics, U.S.D.A. August, 1942. Mimeographed for administrative use.

greater effort for more effective distribution and utilization of workers and machinery; fuller utilization of farmers and farm workers in areas which still have underemployed farm people; intensive efforts for recruiting, training, and effectively using types of workers who formerly were not considered in the labor market; and adjustments in wages and working conditions."[9]

This modification brings out the potential danger of labor shortages unless steps are taken to utilize all possible sources of farm labor. During the harvest season of 1942, complaints of labor shortages were widespread. Some of these were inevitable reactions to the disappearance of a surplus labor force that is passing out of the picture as fast as the "burdensome farm surpluses" of a few years back. An alarming number of complaints, however, were legitimate shortages arising from bumper crops and unusual expansion of industrial work opportunities. Such shortages can cause real breakdowns of our farm production process, and must be treated promptly and effectively. In 1943, all community labor resources will be needed, and national recruitment programs will have to be stepped up to assure a definite supply of labor where it is most needed.

Apart from the competitive aspects of the labor market, the farm labor supply problem divides itself into two major parts: (1) Farm operators and year-round family and hired workers; and, (2) crop season and seasonal peak labor.

The year-round problem—

1. Selective Service action in support of the Tydings' Amendment has already been initiated, and classification of essential workers is already underway. Since deferred classification is not an individual right but rather a decision based on the relative importance of a person's contribution to the war effort, deferred classification is being, and should be, limited by the quantity and essentiality of commodities produced. Farm workers including operators must be considered in such classification.
   (a) Consideration should be given to enlisting deferred workers in a "Rural Work Reserve" or "Soldiers of the Soil," or some organization to recognize that these workers are serving their country in their most effective capacity.
   (b) Workers with requisite farm experience for producing es-

[9] Ibid.

tial farm products who are not now on productive farms but who are needed in farm production should receive deferred classification if they are willing to accept employment on productive farms.

2. Farm worker recruitment should undertake the movement of operators and workers from low-income farming areas to more productive areas. Such movement seems to involve the following classes:
   (a) Entire farm family for year-round employment. Where going farms in good areas are available for rental or where the family can be placed and housed satisfactorily as hired workers on productive farms.
   (b) Single men for year-round employment
      1. Those not yet of draft age.
      2. Those deferred as experienced farm workers.
      3. Draft rejects.
   (c) Heads of families or unattached men for less than year-round employment. These could be recruited for 6 to 8 months of work with transportation paid and wages high enough to make it worthwhile for them to accept such employment.

Crop season and seasonal peak labor—Labor required for the crop season as well as that required for seasonal peak loads needs to be classified into two types with respect to the special strength or skill or both that is required.

1. Seasonal labor that required special strength or skills. The best type of organization for these workers (such as sheep shearers) seems to be a mobile army of workers, with a crew leader in charge and with transportation paid, to go from place to place and handle the highly skilled special jobs as needed.
2. Seasonal labor that requires no special strength or skills.
   (a) Local phase—In most small rural towns there are older men, boys, women, and girls who can be enlisted for this type of employment. A program needs to be developed to mobilize these relatively unused local labor resources. Some areas have done a great deal during the past year, but we need to enlist mobilization of these workers in all areas. To do this requires a highly decentralized program. Mobilization of youth from the cities for individual placement during the summer months has a place in a seasonal

labor program. This will require a somewhat different type of organization than is used for mobilizing local labor resources.

(b) A mobile land army will need to be organized into companies with crew leaders in charge to do the highly seasonal tasks ordinarily performed by migratory labor. Recruits for such an army, organized into separate companies, would come from the following groups of people:
(1) Draft rejects and men above draft age, mostly of the group that in the past has performed migratory labor tasks.
(2) High school youth.
(3) City women who will volunteer for farm work.

Capital

Farm capital,[10] on hand or available, was at an all-time high in 1942, but may be somewhat less than we would like in 1943. Credit for obtaining or facilitating the use of capital goods is plentiful, partly because farm prices and incomes generally have succeeded in making the farmer a much better credit risk than at any time since the last war. A major danger in the use of credit is the possibility of inflating values beyond reasonably normal capitalization. So far this phase of farm finance has been kept well within bounds.

Livestock—Supplies of livestock and feed are also favorable to high levels of production in 1943. High inventories of sheep and cattle along with record numbers of hogs and poultry can be fed from the largest feed supplies in history. Pork production in 1943 will be greater than anyone would have believed possible before the war. Milk production will be high, but is likely to fall considerably short of demands and could suffer considerably if pastures and labor conditions are worsened. Total livestock production may be at its peak in 1943, and certainly cannot be maintained unless feed supplies are built up either from production or Canadian imports to meet the increased livestock programs. Our wheat reserves will become an increasingly important part of our feed stocks during the latter part of 1943 and in 1944. However, at present United States and Canadian feed stocks and livestock numbers offer one of the brightest parts of our 1943 resource picture.

Farm Machinery—Except for labor, the most important problem

[10] Fixed and operating.

in 1943 is likely to be farm machinery. The year 1940 represented a fairly high level of farm machinery production. For 1942, manufacturers were limited to an overall level of new machinery manufacturers 83 per cent of their 1940 production with a wide range in limitation on specific machines. Milking machines, for instance, were permitted up to 206 per cent of 1940 production.

The present limitation order for the year beginning November 1, 1942, provides for manufacture of new machinery at a level equal to 23 per cent of the average of 1940. Furthermore, in the past year there were large inventory stocks in dealers' hands and now there are none. Although it is possible that somewhat larger allocations will be made for later manufacture, an extremely tight situation on new farm machinery and equipment is inevitable. (Jan. 1, 1943).

This situation necessitates rationing the purchase of all important farm equipment in order to get machines in the hands of farmers who can make the greatest use of them in food production. If repairs are available as needed, the question is how far old machines can be repaired to do the work for another season. Fortunately, it is contemplated that machinery repairs will be available as needed although the late date of signing the limitation order may hinder timely receipt of repair items.

General shortages of labor are greatly increasing the need for adequate labor-saving equipment. New machinery is badly needed to handle production in areas in which critical commodities constitute new enterprises to many farmers, or in areas making outstanding increases of a crop requiring special equipment. Also, stepped up production rates throughout the country will increase the need for repairs and replacement parts which unfortunately often require some of the scarcest materials such as copper, brass and high-grade steels.

The brighter side of the machinery picture is the large inventory of machines and equipment which farmers have built up in recent years. No other large nation has an agriculture so completely mechanized and so well equipped for large-scale production. However, the more complete the mechanization, the greater the need for repairs and replacements to maintain the machinery inventory. Some new machinery, replacement parts, tires, and adapted new equipment for our predominantly labor-saving machinery is necessary unless we are willing to accept the alternative of finding additional farm workers. Actually, it is doubtful that we have such an

alternative over a wide front because our mechanized farms cannot make the backward shift to horse equipment. Horses and horse equipment are also scarce and the shift would have to be all the way back to hand labor.

The production machinery problem has several well defined aspects. Harvesting machinery must be made available to farmers growing increased quantities of critical war crops. Some areas have more flexibility and can shift from wheat to dry peas or from oats to soybeans using the same machines with minor adjustments. Tillage equipment is also needed although shortages are not so widespread. The greatest difficulty here lies in the large numbers of farms which bought new tractors in recent years and have since been slowly accumulating equipment to go with the tractor. Also needed is more multi-row equipment to offset some inevitable reductions in numbers of workers.

There are other needs for special equipment such as beet drills, milking machines, hay loaders, stackers, and side-delivery rakes. Quite isolated but rather important is the need for track-laying tractors in some western irrigated areas and on steep dryland units. Replacement is particularly needed where harvest and tillage equipment is designed for use with track-laying tractors.

Fencing materials—Fencing materials are even more scarce than new farm machinery. There are practically no stocks on hand. A request made in July, 1942 for 50 per cent of the 5-year average manufacture has recently been approved by War Production Board. This rate is now expected to hold for the last quarter of 1942 and the first quarter of 1943. It will be 50 per cent in terms of roddage, with lighter gauge, and simplification of design cutting the weight of the new supply about one-third. Fencing will be rationed along with machinery.

Care and conservation of machinery and equipment should be a watchword on all farms in 1943. Expanded livestock programs need every inch of wire that can be saved from the scrap pile, and heavy field work will soon catch up with what in 1942 was a fairly adequate machinery inventory. All rationed equipment will be allocated on the basis of maximum use criteria and machinery now on farms should be "lent and customed" to the limit. Of paramount importance, however, is the assurance of replacement to farmers making custom use of their machines. The importance of the Nation's food program should insure reasonably adequate allocations

of scarce materials to agriculture, but farm machinery cannot be allowed to compete with tanks and guns for copper and steel unless our present machinery is fully used.

In general, other farm materials will be fairly sufficient in 1934. Nitrogen fertilizer is somewhat short, also pyrethrum and rotenone insecticides.

Management—Farm and National

We must assume wide flexibility in our ability to manage all our agricultural resources in 1943. At the same time, we had better admit that there are a few things we still don't know about the old farm, or at least about its operation. The objective of management in 1943 should be to get the greatest possible food output. Honest mistakes and honest ignorance must be expected, but their effect must be minimized so that total agricultural production is as large as weather, labor, materials, and marketing facilities will allow.

We have said little about the need for gauging production to market outlets, a full subject in itself. So far as 1943 production is concerned the production goals are intended to reflect probable market outlets wherever they are a limiting factor. For example, soybean goals are reduced slightly in the Corn Belt and increased in the South, largely because of the distribution of available crushing capacity. Hog production was also partly reconciled with available slaughter capacity, although the December pig report indicates that farmers are more optimistic, perhaps paying too little attention to long-run feed supplies, processing facilities, and other essential commodities, which are outweighed by the favorable hog-corn ratio.

Management resources of 1943 can be logically split into three categories,—the commercial farm, the small or low-income farm, and our State and Federal program administration. In general, each of these will be better managed in 1943 because of the experiences of 1942.

The family-sized commercial farm is the main cog in our production machinery, and the managing ability of the operators is unusually high and was outstandingly good in 1942. From such farms in 1943 will come the majority of all increases and of total production. During the coming year, there are three ways in which the entrepreneurs on these farms may be able to improve their operation: (1) By studying improved practices in crop and live-

stock production to determine their suitability to wartime conditions; (2) by increasing on local levels their cooperative or neighborly activities that are aimed to maximize the use of men, machines, materials, and experience; and (3) by going as far as possible in the production of more essential commodities.

One very considerable help in developing practices to offset labor and material shortages is the relatively plentiful supply of feed grains. It will take less labor and materials to produce the additional meat from feeding hogs to heavier weights than it would to produce more hogs. Moreover, at present and prospective price relationships it will pay farmers to get a part of their output in this way.

Feeding dairy cows much more heavily than most farmers have done in the past produces more milk but requires less labor than handling more cows,—and no new equipment. Despite shortages early in the season we will have per animal more oilseed meals available for feeding to livestock than we had in 1940. If this could all be used to balance up the protein in the livestock rations a considerable increase in production could take place with scarcely any additional expenditures of labor and scarce materials.

In many areas of small general farms, the machinery on each farm is by no means being used to capacity. A good inventory of available machinery needs to be matched against the amount of work in the county that can be done by each type of machine. A "share your machinery program" could then be developed similar to the present "share your car programs." Trading machine work for labor at standard rates, doing more custom work, and encouraging cooperative use of machinery all have a place in such a program. Along with vigorous machinery repair campaigns these steps may get us over the hump of 1943 machinery shortage. It won't be done without considerable effort, and some crops may be lost in the process.

In the depression year of 1932, production was maintained at a high level with the purchase of not much more machinery and other materials than will be available for 1943. Labor, of course, was plentiful, but prices were at give away levels. Next year prices will be relatively high for the products which we so badly need. Under normal weather conditions the inducement that farmers will have through satisfactory returns for doing the job, as well as the prospect of service to the country by producing a much needed

food supply, may work greater wonders with 1943 production than we can foresee at the present time.

A problem, with labor and management aspects, is the tendency of some operators to combine a full-time industrial job with what has been a full-time farm job. Although other family workers can help take up the slack in these cases, there is usually a falling off in yields and a decrease in volume of farm business. Individually, these are small items, but nationally, they add up to distressingly large totals. Many of these marginal farmers are definitely better off if they do neglect or abandon their farm enterprises for shorter hours and higher pay in industry. Frequently these farms could be operated with no resulting decrease in output by neighbors who also have slack time. Wherever possible, we should slant our programs towards more attractive alternatives in agriculture, either as operators or hired hands.

The small farm—The small farmer may well be the most critical of the contributors to wartime food production. Sixty-five per cent of our farmers were reported in 1939 to have received one billion dollars or only 16 per cent of the total value of products sold off the farm.[11] This group has been a somewhat forgotten lot in peacetime. Today, however, these small farmers, (or what is left of them) offer a reservoir of skilled farm hands and a vital "widow's mite" of food production.

Many of this group have been part-time industrial workers who are now on full time. Others with youth, ambition, and reasonably small families have probably become members of our high-paid industrial force. Some may have been drafted. But those who are still on farms should remain in farm employment. Their labor on their own farms if sufficiently productive, or in more productive jobs on larger units, represents an important contribution to our coming food effort.

As the national farm labor crisis becomes increasingly acute, all movable segments of this labor force should be encouraged to serve for the duration on farms where their labor and that of their families will add the most to our food production. In areas where land resources have been chronically low in relation to population, this wartime labor recruitment should offer a one-way ticket and employment security for families willing to make the move.

[11] Total of farms reporting less than $1,000 value of products sold or used on the farm, 16th U. S. Census Summary, Third Series.

In areas where migration is heavy, the small holdings should be combined into types and sizes that will support farm families at adequate levels of living, thus adding considerably more to commerical food production. Topography and location will limit the extent of such combinations and will leave many units still too small for much commercial production. Even on these units, our unlimited food needs dictate increases in commercial production. Help in management will probably be necessary, but may be streamlined to fit war needs, perhaps by some group technique of the round-table type. Among the many possibilities for increasing production on small units is the community pooling possibility in the South where tractor equipment can be stretched to till larger acreages allowing "corn acreage for the mule" to be used for pigs, or a cow or maybe for peanuts.

Public management in wartime—Some of the preceding section is probably more concerned with food production administration than with an appraisal of management possibilities on small farms. At least, it implies an objective that should be basic to all production planning in 1943, namely, *do everything necessary to encourage and help our farm people in their efforts to do the "impossible" in 1943 production.* Because of the heterogeneity of farming, there have been hundreds of proposed solutions to specific farm problems. Many suggestions have been excellent and are already in or on their way to application. For discussion purposes, we are concluding this paper with three general proposals that seem to merit more consideration in the weeks ahead: (1) Determining and concentrating on the production of essential commodities; (2) Developing to the utmost the two incentives that were most effective in making the 1942 crop—adequate income and patriotism; (3) Perfecting individual farm planning and using it as an educational tool and administrative technique for fitting goals to production capacity farm by farm.

Essentiality of crops—Shortages of some food items is convincing enough evidence that we can't have everything for the duration. To obtain the most efficient use of transportation, storage, and other scarce materials of production, it may become, necessary to limit the production of crops that contribute least to our wartime economy for the resources used. Luxury products will not be alone on such a list. Although considerable work has already been done, current lists of essential crops are tentative and still under study.

Present research on this subject is concerned with three types of considerations: (1) Nutritional, on the basis of vitamins and calories; (2) Transportation, on the basis of weight and volume; (3) Production, on the basis of efficiency in the use of productive resources. The combination possibilities are manifold.

Incentives to production—During the past year, good prices and patriotic appeals combined to stimulate some of the hardest work ever done in agriculture. In 1943, these stimuli must be strengthened to maintain and increase the farmer's interest in a continuing all-out effort. It is difficult to maintain the man-killing pace of recent months, but somehow it must be done. Patriotism, as an appeal, is always effective with farmers, but it should be supplemented by a vigorous informational campaign that will show the farmer and the rest of the Nation just what and how much he is contributing to the successful prosecution of the war.

Price appeals represent a much more difficult problem. Higher prices represent a burden on the consumer in a rising cost of living that is also basic to the spiral of inflation. In addition, higher prices for any one commodity must be considered in view of their effect on the production of competing products. However, high farm returns do not necessarily mean higher consumer prices. The present unfavorable reactions to subsidies (widely viewed as a relief measure or a kind of public graft) would disappear if the widespread subsidy elements in the entire price structure at present were more fully understood. There is also the question of payment for cost of converting to new enterprises (as in industry) as well as the need for bringing out the higher cost units of output that do not require conversion. In fact, a workable scheme of payment for increased output could be developed to compensate for increased costs and as incentive for maximum effort.[12]

So far as price relationships are concerned, any price program should be based on a general price structure favoring those commodities deemed essential. Once such a program is developed it should be followed through to the hilt with no defection on guarantees and with every assurance of reasonable assistance of all kinds (labor, machines, and materials) to cooperating farmers.

Individual farm plans—Basic to an all-out program such as that

[12] For details of possible plans of payment for increasing output, see Adapting Agricultural Programs to War Needs, Sherman E. Johnson, JOURNAL OF FARM ECONOMICS, February, 1942.

sketched above is some means of working out with each farmer his most desirable wartime farm organization for maximum output. This can be approached by individual farm planning, or more explicitly by sitting down for a man-to-man talk in which the farmer and an informed local official swap information and develop a crop and livestock plan for the farm. The farmer tells what he has to work with and what help he needs. The local official tells what is needed from the farmer and how the Government can help the farmer in supplying these needs. Together, they can then develop a farm plan that fits the capabilities of the farm.

Where the farmer's labor, equipment, or materials of production are not sufficient for an optimum program, the deficits can be summarized locally and be alleviated by whatever public action is necessary. Neighborhood trading of tools and work will alleviate the minor problems of many farms. In 1942 seasonal labor and machinery crises were met in some instances by community organization of all resources to get the job done. More of this can and must be done in 1943.

Serious deficits of labor, machinery, fencing, and materials can be summarized objectively at local levels and be directed to the State or Federal agency charged with the responsibility of making up such deficits. Thus, the individual farm plan becomes a tool of all agencies that are working with the farmers either directly or indirectly. The farm plan would not be a complete farm schedule, but it should contain all the pertinent facts that are essential to effective functioning of the many services designed to aid farm production. When summarized at local administrative levels, the county in most cases, there will be available a central focus for operating such programs as adjustment, recruitment, rationing, credit, allocation of seasonal and regular labor, education, rehabilitation, distribution and storage. In addition to centralizing this information, each of the cooperating agencies and the farmer will be spared the expense and bother of repetitive farm visits.

Another decided advantage of a well worked out farm plan is the opportunity it offers each farmer to find his place in the war effort. Each cow, each pig, each acre of corn, of peanuts, of cotton, is produced by a farmer who understands why these commodities are necessary. Every time a farmer goes out to custom plow or combine, to help in silo filling, threshing, or some other neighborhood job, he knows the necessity of the job and his place in it. While in many

respects, these plans will aid tremendously in administration of public war programs, perhaps their most outstanding contribution will be in allowing free play to individual farmer initiative developed on a cooperative basis from a thorough understanding of what is needed to help us win the war and the peace.

We are embarking on a program of differential production, and probably won't be under full sail until 1944. But, in this program we must develop a compact with the farmer. The farm plan and worksheet being used in 1943 is the farmer's blueprint for maximum production; his pledge to produce his part of the essential commodities called for in the 1943 goals, or his willingness to shift into maximum production on his farm if some of the obstacles to full production can be cleared away. It also represents his need for specific assistance in order that he may carry out a program of maximum production.

Summary

A summary appraisal of agriculture's resources for 1943 production would give them a rating "somewhat less than adequate for the job at hand." However, the most uncertain factors other than the weather are labor and management, human equations that can be mobilized under intelligent guidance and an adequate understanding by farmers of the job that needs to be done. In some ways, our food program to date has been successful without closely coordinated direction of national programs. The coming year, with its shortages in critical factors, represents the greatest challenge that administrative planning in agriculture has ever faced. The seriousness of our objectives and the size of the obstacles to be overcome are certainly not conducive to overconfidence. It is perhaps best to rely on the sincerity of our efforts and faith in the capacity and the patriotism of American farmers.

TECHNIQUES FOR ACHIEVING AGRICULTURAL GOALS FOR 1943

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I. Interpretation of the Term "Goals"

"GOALS" as used in this paper is considered to include both the amounts of commodities desired to be produced by American farmers in 1943, and the derived crop acreages and livestock numbers. These goals were determined by the Department of Agriculture and announced in a series of regional meetings held in Denver, Chicago, Memphis, and New York City beginning November 30 and ending December 16.

The goals which derive from anticipated needs with consideration for feasible production, are stated in amounts of commodities. Since the achievement of commodity goals are subject in no small measure to weather and other uncontrollable causes, it is intended largely to confine our consideration here to techniques for achieving the acreage and numbers goals which are a derivative of commodity needs and normal yields. The word goals is further construed to include the indicated acreages of all crops for which allotments are determined. In this connection, it will be noted that some goals are established with the hope that they will be exceeded and others with the hope that they will not be exceeded.

II. Nature of the Problem

In war and peace, but more urgently in war, there is a need for specific commodities in certain amounts. Insofar as it is possible to estimate the feasiable amounts of agricultural commodities to be produced in 1943, they are represented by the announced production goals. Their achievement is of military as well as of economic significance, and is too important to be left to chance if appropriate influences may be brought to bear effectively. The failure to do this would result in lesser efficiency in the utilization of resources devoted to agricultural production.

The establishment of goals and the administration of a program for the achievement of these goals by the Department of Agriculture may be looked upon as an allocation of productive resources to the end that the desired commodities may be produced in quantities appropriately related. It is noted that several departments of

the Government are now engaged in the establishment and administration of allocations and priorities. The related experience of the Department of Agriculture in production adjustment is fortunate in view of the obligations placed upon it in food production at this time.

Each goal is related to feasible production and is established with consideration for the achievement of all other goals to be established. It will be noted that some goals essentially are estimates of the prooduction that may be expected under conditions which probably will obtain during the coming year. The achievement of the more difficult goals is accomplished by the utilization of available resources to the maximum advantage and by the diversion of resources from the production of one commodity to another. It is not necessarily true, however, that in bringing about this diversion like techniques will have equal application for all commodities.

III. Scope of this Discussion

We will discuss briefly under broad general classifications some of the techniques capable of being applied for the purpose of stimulating the achievement of the established goals. The Department of Agriculture has had experience with some of these. Perhaps there are other applicable techniques not listed here. No doubt there are many variations within the general categories noted which have not been tried. This discussion is not intended as a defense of any activities of the Department of Agriculture, but is an attempt to outline objectively techniques available for use by the Government.

We are here concerned primarily with techniques for application through some form of Governmental action. We recognize conditions are such that a significant proportion of the desired production would result, even though the administrative activities of the Department of Agriculture toward stimulating greater production largely became dormant for the entire year. However, we believe that the increased production that will result from the application of administrative techniques is important and conceivably may result in the difference between "enough on time" and "too little and too late."

IV. Techniques for Stimulating Desired Production

A. *Price Adjustment*

Theoretically, in a freely competitive economy price (or exchange

value) is the primary incentive to achievement of desired production. However, there is not now and probably never was a freely competitive economy. This is frequently overlooked by persons discussing the impacts of price on production. To be realistic we must recognize the fact that responses to price are influenced by existing institutional arrangements by reason of which further administrative adjustment may be necessary, either to produce affirmative impacts or to prevent negative impacts.

It is generally accepted that agricultural production cycles result in part from the fact that there is a lag in the responses of agricultural production to given price stimulation. The length of these cycles varies with different products. Price expectations may in one instance result in early production responses and in another only in long-run production responses. This fact is significantly related to the problems of a price program. For example, an increased acreage of tomatoes for canning in 1943 may result from an increase in price expectancy as late as January 1 of that year, whereas the amount of beef produced in 1943 will not be materially affected by a change in January of that year in the price which farmers expect to receive.

One of the weaknesses in existing price legislation arises from the fact that parity prices are not so related between agricultural commodities that the desired production pattern would result if parity prices were simultaneously obtained for all crops. If all commodities were priced at parity, some commodities would be produced in greater amounts and others in lesser amounts than desired due to the choice the farmer would make between the alternative opportunities afforded. For example, if the price of corn were expected to be $1.00, which is about the present parity price, the acreage of corn in 1943 if uncontrolled would no doubt increase considerably at the expense of needed soybean acreage, unless the price of soybeans were raised above the present support level of $1.60. Further, some concern is expressed at this time over the probable reduction in dairy production, at announced price levels, by producers who may prefer to shift their efforts to the production of hogs at the announced levels. Price expectancy is truly a two-edged sword which may result in stimulating or impeding the achievement of acceptable production responses.

Price ceilings have been established for agricultural commodities in many cases without adequate regard to price as a function of

production. Since price ceilings are an established policy of the Government, however, it is only realistic to determine the manner in which some form of compensation may be provided to offset inappropriate price relationships which may result. The alternative of this, of course, would be to remove price ceilings or adjust the ceilings in a manner which recognizes the function of price, and with less regard to administrative maintenance of arbitrarily selected price levels.

Two operations which are used to complement administered price ceilings are: (1) The maintenance of supplemental payments in the nature of subsidies at some point between extractive production and consumption; and (2) the maintenance of price floors announced for stipulated future periods of operation.

The use of subsidies in the maintenance of price ceilings lower than price levels which otherwise would prevail is argued as a curb for inflation. This result might be achieved where subsidies are used to maintain production by the less efficient producing units, whereas an increase in price would have to be spread across the entire production. However, no acceptable means has as yet been found to apply this principle to agricultural production. Price subsidies which have been used in agriculture during 1942 to support price ceilings have resulted in a uniform increase in prices of the particular commodities affected. This type of subsidy has the same inflationary effect as a rise in price. At best subsidies are in correction of faults that should not be permitted to exist over the long run.

Subsidies may be used effectively as a device to adjust the return to producers without altering price relationships of price levels to the purchaser. If administered so as to provide for ready adjustment of disparities in returns to producers of various commodities and to producers of similar commodities in different areas, it is believed that a great deal can be accomplished to offset the bad effect of fixed ceiling prices or of other institutional maladjustments.

All agricultural production is highly speculative. If speculative returns are inhibited, producers must be protected against speculative losses. If ceiling prices are established, price floors are likely to be needed. In general the lower the ceiling, the higher the floor should be be. In most instances price assurances which have been announced by the Secretary are in the nature of stop-loss commitments which hedge the producers' position against the risk of sharp

decreases in returns in prices and are less than prices which may be expected.

A planned application of ceilings, subsidies, and floors, in combination, and sometimes pegged prices, announced for an advance period, is a form of forward pricing and appears to be the program most expedient at this time. Forward pricing by individual commodities admits of the selective stimulation of production, whereas any given set of historic price relationships may result in a disproportionate stimulus to the production of some commodities.

B. *Widespread Application of Production Skills*

Training in production skills and scientific knowledge are the primary functions of the Land-Grant-College system of education and of Agricultural Extension, and appropriately may be considered a broad general category of techniques for achieving production goals. While the development of production skills is primarily effective in influencing long-run production, it is also capable of being adapted to influencing short-run production materially. For example, livestock production may be stepped up through the adoption of better feeding practices, and disease control campaigns. Crop production, likewise, may be stimulated by the adoption of certain soil management practices which contribute materially to current and short-run production responses.

The extent to which scientific research and education have contributed to our present capacity to produce is inestimable. A single example of this is the current yield of corn resulting from the use of hybrid corn. Certainly the application of a particular technique which will secure the adoption of appropriate skills or the greater application of knowledge in the areas in which production needs to be expanded should be conducive to the achievement of the more difficult goals.

Attention is directed to the fact that the development of the so-called "action programs" of the Department of Agriculture in recent years have contributed materially to the widespread application of many production skills. Other impacts of production programs are discussed elsewhere in this paper.

C. *The Management of Production Inputs*

Perhaps one of the most significant techniques for influencing the production pattern in 1943 will be the exercise of varying de-

grees of control of scarce production inputs. These include feed, labor, farm machinery, fertilizers, insecticides, and medicants. In the case of farm machinery, the supply of some kinds will be carefully rationed to the individual user. With respect to other production inputs, significant adjustment in use will result from allocation of available supplies to major use categories. For example, production could be influenced materially by withholding fertilizers from use on crops likely to be produced in abundance and permitting their use on crops in need of being increased.

Another way in which production may be maximized is in the recombination of the most productive resources so that they may be used most efficiently. For example, this may be accomplished in part by encouraging the movement of partially employed farm labor to the more productive areas where such labor may be fully employed and where, for the lack of such labor, the more fertile land would not be fully utilized in the production of scarce commodities. The 1943 food production program of the Department of Agriculture gives consideration to the full development of this approach. In January, producers on all farms will be asked to indicate their plan of operation for 1943 and to give information which will indicate whether certain of their resources are fully utilized and whether they are in position to utilize certain resources which may be made available to them through the efforts of the Department. It is roughly estimated that about 85 per cent of commercial production is accomplished by one-third of the farmers; that approximately 12 per cent is accomplished by another one-third of the farmers; and that the remaining one-third of the farmers produce only about three per cent of farm products marketed commercially. It is believed that the greatest opportunity to effect production increases through a recombination of resources lies principally with the second and third groups of producers indicated above.

The use of credit might be listed under this or some other general category. Credit for agricultural production in 1943 will be a limiting factor only in a minor way. However, careful administration of credit resources may result in stepping up production in individual cases over the production which would otherwise result. This is another example of the manner in which a recombination of resources may be effected so as to maximize the resultant production.

Another significant resource in farm production is productive acres, the supply of which may be influenced by reclamation, irri-

gation, or drainage. Additional land may be brought into use in one of these ways. The efficiency of producing areas now utilized may be increased through the shifting of other production resources from the less fertile to the more fertile areas.

D. *Production Programming*

The establishment of goals or allotments and more particularly the breaking down of these goals to local areas and to farms is in itself a technique calculated to stimulate the maintenance of desired production levels. This is particularly true at this time when other natural production stimuli are artificially affected in such a way as to impair their normal functions. The establishment of goals, in effect, is a determination of the priority of use to which production inputs will be made. The establishment of allotments not to be exceeded results in a diversion of production resources to commodities for which the need is greater.

The psychological effect of the patriotic appeal for the "all-out" war effort will, no doubt, be a large factor in stimulating production along the lines of the desired pattern. Added to this are the urgence, the pressures and counter pressures of individuals having administrative responsibilities—the results of which efforts are to gain greater conformation with the desired production pattern.

The 1943 program of the Agricultural Adjustment Administration combines with these psychological factors the use of benefit payments. The Agricultural Adjustment Administration payments in 1943 are so conditioned as to induce conformity with a complete production plan. While the payments available for the farmer are computed as previously, deduction from such payments will be made for failure to achieve war crop goals established for the farm. This, in effect, is a negative approach to the use of incentive payments which appropriately could be made for the production of desired commodities. "Incentive payments" of this kind may be distinguished from incentives directly associated with price, because of their close association with psychological factors not wholly related to price. It is recognized that the amounts of payments to be made under the Triple A program in 1943 are far less significant as a dollar factor in inducing performance than in years when farmers' incomes were much less. It is believed, however, that these payments will continue to contribute materially, along with psychological factors, to achieve desired production patterns.

E. *Miscellaneous Techniques*

There are a number of other techniques which are not readily classified in the categories outlined above but which merit consideration and which in some instances will be used in 1943 and later years.

Suggestions are frequently made for some form of award for a given measure of efficiency such as the "E" used in industry at this time. It should be pointed out in this connection that greater difficulties are encountered in the use of this type of production stimulus where a larger number of production units are involved, as in agriculture, than in industry where a much smaller number of units is engaged in production. It may be pointed out that techniques such as this which are adapted to stimulating group efforts are not necessarily adapted also to stimulating individual effort, since the stimulation to efforts of the group arises out of the mutual cooperation and encouragement which result among the individual members of the group.

Proposals have been made that the Department of Agriculture underwrite minimum costs which may be incurred in the production of specified crops. This form of assurance may yet prove to be a useful technique but should not be confused with Crop Insurance which is to be administered on a sound actuarial basis. There are significant differences between the two.

Another of these is the contract between the several individual producers and the Government to endeavor to produce a specified amount of specific commodities. The cost-plus contract familiar in industry need not be considered wholly inapplicable to agricultural conditions. It is conceivable that it might become necessary to obtain specific commitments from producers for certain crops such as hemp—in the production of which farmers have had little or no experience and which they were unwilling to undertake to produce on any other terms. This attitude would not be different than that evidenced by industry at the outset of the war, and perhaps should not be condemned as unpatriotic at least so long as the Government engages in such techniques in other areas of production.

In extreme instances where a commodity would not otherwise be produced by private enterprise, it may be necessary for the Government to become the producer. The Government is engaged at this time in the production of the guayule plant as a source of rubber. This effort is not wholly experimental but is in part in-

tended to be productive of needed supplies. It is generally agreed that the Government should not engage in the production of agricultural commodities which ordinarily can and will be produced by private enterprise. Despite this a considerable number of letters come to the Department of Agriculture with offers of land free of rent to be used by the Government as a producer.

E. *Summary*

Actually in the program of the Department of Agriculture it is recognized that there is a need for the simultaneous application of several of the techniques outlined above. In many instances unless they are administered with a great degree of skill, a negative impact is possible. I am not certain that in the administrative application of these techniques the impact will always be positive. There is always room for improvement in the skill with which these techniques are applied, but our skills are not increased by an unrealistic refusal to recognize and consider all of the factors involved in the situation with which we are confronted, and which tend to make difficult the achievement of the vastly expanded production now being undertaken.

The administration of the more effective of the techniques outlined above is a challenge to the Department of Agriculture at this time. Such an undertaking is likely to result in administrative inefficiencies and awkwardnesses which may be interpreted by the less realistic to impeach the sincerity of those responsible for such administration. Some may question the assumption that such administration should be undertaken. However, we believe that "we the people" have here a challenge and responsibility from which we cannot escape and that the possibility of only limited success does not justify our failure to meet the issues.

DISCUSSION BY L. J. NORTON

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Mr. Reed's program for achieving goals involves the following elements: (1) use in the proper combination of price ceilings, price floors, and subsidies to induce increases of desired products and decreases in undesired products; (2) education concerning practices which will expand output; (3) management of supplies of input factors; (4) setting up individual goals with rewards and penalties. He mentions certain other possible factors including: (1) awards of merit; (2) underwriting of minimum costs in connection with certain crops; (3) contracts with specific producers, which might

be applied to a new crop like hemp; (4) government production, as in the case of guayule.

At the outset, it must be recognized that in an industry such as agriculture, which is organized in small independent units, deals with living processes, and is subject to weather influences, only a very approximate control over total output can be effected. Achievement of maximum output is what is desired because there is great interchangeability among foodstuffs. It seems to me that a program for wartime production should emphasize maximum total output. It must be admitted that this was not the specific subject assigned to Mr. Reed.

A program of maximum production would, it seems to me, involve four elements:

1. Every farmer should be permitted to use his resources in the way which will maximize his income and production under the price structure which he anticipates. This would mean that the present AAA program should be modified for the duration of the war. This means Congressional action. The present situation, under which, in the corn-belt states, goals for corn exceeds allotments and persons are penalized for over planting corn, is ridiculous. The farmers in the eastern corn belt, who have land better adapted to wheat than to other crops, should be permitted to grow wheat as they judge to be best. If we need vegetable oils, let the South produce its share in cotton oil rather than forcing farmers to produce more peanuts.

2. Pursue an active pricing policy of floors and ceilings which will restrain price increases and yet encourage production of desired items. This would likely involve certain legislative changes. Mr. Reed is correct in saying that parity prices do not necessarily provide proper relationships between the prices of different commodities. The chance that the accidental relationships in the five-year base period are the proper relationships to get products desired in 1943 is infinitely small. In fact, the government agencies have recognized this fact by allowing livestock prices to go substantially above parity. If political necessities compel us to maintain the parity concept, some device for permitting internal adjustments within the price structure is essential. Possibly a provision, which would look toward parity for farm products as a group with flexibility among the individual commodities would be possible. It is well known that when industry is active, returns to workers (both operators and hired laborers) are such as to draw labor from agriculture. Therefore, if agricultural output is to be maintained, a high level of farm returns—judged by peacetime standards—is essential. So it is fairly certain that prices for farm products as a group will average parity or better. But, as Mr. Reed suggests, some way to maintain flexibility within the price structure is essential. It is obviously foolish to attempt by loans to maintain wheat prices at a level which makes its production highly profitable and also make parity payments to cooperators at a time when we have large stocks of wheat on hand and shortages of animal foodstuffs. Obviously, a desirable price policy for wheat would encourage conversion of surplus stocks of wheat into animal foodstuffs.

3. We should do what is possible to keep the necessary factors of production available in adequate supplies to maintain the overall level of production desired. Mr. Reed mentions the desirability of using control over these to reduce the output of certain less necessary items. This may be useful, but it is less important than maintaining adequate overall supplies. It is no secret that national policies allowed our farm labor supply to be reduced to a dangerously low level. Only the fact that most of our farm operators were married men prevented the operation of Selective Service from seriously cutting farm production. Pressure of public opinion forced a change in policies which now exempts essential farm workers. Likewise, the present outputs of farm machinery may be dangerously low. It may be as important to have enough tractors as to have too many tanks, and to have enough farm workers as to have more soldiers than can be moved to fighting zones. One of the principal duties of the U. S. Department of Agriculture should be to see to it that these necessary supplies are kept available to farmers. There is increasing evidence that the Department is coming to a recognition of this.

Such supplies as are available should be used on the farms where they will most effectively maintain output. It is difficult to see how "recombination of resources" among the two groups of farmers which Mr. Reed says represent two-thirds of the total number of farmers and produce only 15 per cent of the total output, will increase output much. If he means to move workers from less productive areas in order to maintain the labor force in good land areas and to allow the remainder to more fully utilize their time, then it would seem to have merit, but if it means to use scarce factors of production to attempt to get increased output in areas of low production, then it will tend to reduce rather than increase total output

4. Carry on intensive educational work in practices which will maintain or increase production. However, economic consideration must not be lost sight of. All agencies have urged more use of protein feeds. But the limiting factor is supply, and currently high protein feeds have to be informally rationed. So far as economic instruction is concerned, there is a large field which must not be neglected. This relates to the organization of productive factors for sustained or increased output: for example, ways of pooling labor on neighboring farms for more efficient operation. The agricultural colleges have a large function to perform, and it is to be hoped that they will live up to their opportunities. Their field is chiefly that of widely extending knowledge concerning practices based on scientific analysis in the physical, biological, and economic fields. The Soil Conservation Service and the practice portions of the AAA program can also be very important in this connection.

Determination of specific goals for individual farms and informing farmers concerning these likely has educational value in advising people as to what is desired, but it seems to the writer to be of less importance than vigorous and intelligent efforts along the four approaches to adequate production mentioned above.

MAINTAINING FARM OUTPUT WITH A SCARCITY OF PRODUCTION FACTORS

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FARMERS are faced with the problem of how to maintain production in spite of a scarcity of many production factors. The list of scarce items already includes labor, machinery, fencing, some spray materials, nitrogenous fertilizer, and protein feed. As the war continues this list will become longer.

A few months ago, shortages of only a relatively small number of agricultural products were apparent. In May 1942, one writer listed the following groups of products: oil bearing crops, hogs, poultry and dairy products.[1] This list is growing. We are soon to have rationing of dried and canned fruits and vegetables and of meat. Our so-called burdensome wheat surplus may soon appear as the brightest spot in the food picture.

With a shortage of food, and a shortage of the factors of food production, which farms should have first choice of the factors of production which are available? From the point of view of the welfare of ourselves and our allies, first choice should go to the farms where the output per unit of input of the scarce items is greatest. It does not seem to be generally agreed as to what groups of farms fulfill this requirement. Schickele has stated that ". . . it is on the smaller, under-improved and not highly commercialized farms that the possible rate of output expansion is relatively greater than on the larger, well improved and highly commercialized farms. . . ."[2] We should like to direct a portion of our discussion to investigation of this thesis.

In the first place, farms of small output should be divided into at least two groups as follows:

(1) Farms of small output in unproductive land areas. These farms do not necessarily have small acreages, and in some cases may even have considerable numbers of livestock. They have low rates of production imposed by limitations of poor land.

(2) Farms with small output in productive land areas.

[1] Rainer Schickele, Obstacles to Agricultural Production Expansion. Journal of Farm Economics, May, 1942.
[2] *Ibid.*

Table 1 illustrates the type of variation in output which is commonly found on groups of farms with different grades of land. Farms in land class II (the poorest land included in this study) averaged less than one-fifth as much milk sold as in land class V. This was a result of fewer cows per farm and lower production per cow. Farms in land class V sold more than three times as much milk per man as farms in land class II and in addition produced more cash crops per man.

TABLE 1. RATES OF PRODUCTION AND OUTPUT IN VARIOUS LAND CLASSES CENTRAL NEW YORK, 1939–40*

Land Class	Number of Farms	Number of Cows per Farm	Hundredweight of Milk Sold		Pounds of Milk Sold per Cow	Tons of Hay per Acre
			Per Farm	Per Man		
II	49	8.6	349	250	4073	1.0
III (low)	87	15.8	798	484	5063	1.4
III (high)	34	17.8	1051	557	5893	1.7
IV	12	18.6	1243	654	6698	1.7
V	38	25.9	1914	806	7391	1.8

* Data for land classes II and low III are from a study by L. S. Hardin in Otsego County. Data for the other land classes are from a study by I. R. Bierly in Chenango County.

A farm laborer's output is much greater in the higher land classes because his working tools are superior to the tools of production used by farm workers in the lower land classes. His more productive soils make it possible for him to make more efficient use of fertilizer and lime. His larger business and more efficient organization enable the farm worker in the higher land classes to produce more in each man hour that he works and to do more productive work with each dollar's worth of machinery and equipment.

If the greatest possible farm production is desired it is essential that the farms in the higher land classes be the first to be provided with the man power and machinery to produce. The experiences of farmers themselves have shown this to be the only course to follow. Based on the figures in Table 1, 100 men put to work in land class II would produce for sale about 1250 tons of milk in a year. If these 100 men were put to work in land class V they would produce about 4000 tons of milk for sale as well as some cash crops besides.

Some persons explain that the more productive areas (such as land class V) are already being farmed at near-capacity levels,

while labor is inefficiently used on farms of small output in areas of low natural soil productivity. They reason from this that if additional equipment, fencing, or fertilizer were available they should

TABLE 2. RATES OF PRODUCTION AND OUTPUT—TEN SMALL FARMS AND TEN LARGE FARMS IN LAND CLASS V IN CENTRAL NEW YORK, 1939–40

Farm Number	Average Number of Cows	Hundredweight of Milk Sold	Man Equivalent	Hundredweight of Milk Sold per Man	Hundredweight of Milk Sold per Cow
1	6.8	579	1.0	579	85
2	7.0	576	1.0	576	82
3	8.1	458	1.0	458	57
4	8.2	491	1.0	491	60
5	12.2	810	1.2	675	66
6	13.2	735	2.4	306	56
7	13.5	760	1.0	760	56
8	13.6	892	2.1	425	66
9	14.3	1041	2.1	496	73
10	14.7	567	1.2	472	39
Average of 10 small farms	11.2	691	1.4	524	64
29	36.0	3425	3.1	1105	95
30	37.3	3987	4.4	906	107
31	37.9	3304	2.7	1224	87
32	39.3	2975	2.6	1144	76
33	41.5	3785	4.4	860	91
34	43.4	3124	3.5	893	72
35	45.5	2778	4.2	661	61
36	47.2	3031	2.2	1378	64
37	52.2	3764	2.8	1344	72
38	53.0	5105	6.1	837	96
Average of 10 large farms	43.3	3528	3.6	1035	82

be used on these less productive farms in an attempt to increase output. Some have gone so far as to say that additional livestock should immediately be placed on these less productive farms in order to make more efficient use of the available labor. This would mean transferring livestock from more productive areas where they are better cared for. This is like suggesting that a football coach should spend more of his time on his poor players because they have so much more room for improvement. Rather than transfer livestock and equipment to available labor in unproductive areas, manpower and machines should be encouraged to move from poorer lands to the more productive areas where shortages exist.

Records on farms in highly productive land show great variation in the efficiency of production and thus do not substantiate the assumption that these areas are already working at near capacity. In Table 2, certain factors are listed for some of the farms in land class V in table 1. The ten farms with the fewest cows and the ten farms with the most cows are included. The ten smallest farms represent small businesses on good land. It will be seen that they vary greatly in milk per cow and in output per man. The range in output per man is from 306 to 760 hundredweight of milk.

The ten largest farms also show a wide variation in rates of production and output. It certainly does not appear that all of these farms are being operated at maximum efficiency, as milk sold per man ranged from 661 to 1378 hundredweight. There are 220 farms included in table 1. These 220 farms sold about 21 million pounds of milk in the year of this study. Of this amount, 3.5 million pounds, or one-sixth of the total was sold from the 10 largest herds in land class V. Yet these ten farms employed only 36 men or less than one-tenth of the total number of men employed on the 220 farms. Even so the efficiency of several of these ten could be much improved.

The data here presented illustrate three different situations which are common to most any agricultural region. These are:

(1) Farms on poor land.
(2) Small farms on good land.
(3) Large farms on good land.

The most serious shortage with which farmers must contend during the present emergency is man-power. The large farms on good land use labor the most efficiently and every effort should be made to see that their needs are met. With man-power limited they should have priority over farms in the other two groups. Small farms on good land should take precedence over farms on poor land.

The amount of new farm equipment to be manufactured in 1943 will be drastically reduced. The small amount available should go where it can make the greatest contribution to food production. This is on large productive farms, to operators of small farms who can do considerable custom work, or to groups of farmers who can make efficient use of the equipment through cooperative ownership. We should not permit a farmer on poor land to purchase the one available tractor in the county if it is needed on good land where it can produce much more food.

If fertilizer is scarce it should first be applied to land where the

shortage of plant food is the only serious limitation to crop production. Limited fertilizer supplies should not be used on thin, poorly drained soils where plants cannot grow well either with or without fertilizer. This means that first choice for fertilizer should go to the good land, but not necessarily to the large farms on good land.

High protein feeds are becoming scarce. We must make certain that farms with high producing cows and hens get adequate feed supplies. If some of our cattle must be fed poorer concentrate rations, or smaller quantities of concentrates, it had best be the cows on poor land which do not produce much anyway. Government sponsered programs should not be allowed to operate in the opposite direction. If some poultrymen must reduce their flocks because of insufficient feed it had best be the man with poor birds in a poor house, and who gives them poor care. We should not have programs which by granting liberal credit or by other means tend to preserve these inefficient units so that they can use feed which is badly needed by more efficient farmers.

The above recommendations may appear to leave farmers on poor land in a difficult position, and to some extent also small farms on good land. As far as the farms in the poor land are concerned, many of the workers, including the operators, should obtain employment in industry or on good farms. In this way they can contribute much more to the production of the nation. Fortunately large areas of poor land in the Northeast lie close enough to factories so that farmers can obtain industrial employment without a change of residence. In some parts of the country, obtaining better employment necessitates a change of residence and is therefore more difficult. All farms, of course, make some contribution to the total food supply. Farmers in poor areas can produce more if aided by credit, education, supervision, and other programs. However the problem of helping the underprivileged farmers, while important, should not be confused with the problem of obtaining the maximum production of food with the minimum use of labor, new machinery, fertilizer, and other scarce factors of production. Agriculture, like industry, must establish priorities if scarce resources are to be used where they will result in maximum production.

While the large farms on good land are the most efficient producers, they cannot produce enough total food to supply our needs. The smaller and less efficient farms on medium and good land are needed, although many of them might well be combined into larger

and more efficient units. It frequently happens that two adjoining farms each requiring two men could be operated as one unit by 3 men, thus releasing one man for work elsewhere. Frequently two farms each requiring one man (such as the smallest farms in Table 2) can be combined and operated by one of the two men with some help from his wife and children. Again one man is released for work elsewhere. Such combinations of farms are desirable from both a short-time and long-time point of view. At the present time land prices are low relative to the prices of farm products, and it is a good time for farmers to buy additional land if they can use it efficiently.

As we have indicated there is room for much improvement on both large and small farms in areas of good land. Educational and extension programs should be directed to this end. Until recent years most of our extension programs were aimed at the better farmers. Some persons have been very critical of this situation. During the past few years, large numbers of men (primarily the Farm Security Administration) have directed their efforts to the improvement of the condition of low-income farmers. This program has been characterized by close supervision. With a shortage of men able to carry on extension work with farmers, it may be necessary to curtail the work with the low-income farmers in order to give sufficient assistance to the farmers who produce the bulk of the food.

The most efficient use of all factors of production is likely to still leave us short of many kinds of food, particularly if a poor growing season is encountered. In such a situation we must eat less animal products and more cereals. Especially we must eat less meat and butter. This has always been the way in which Americans get along with short crops. We eat both the animal and the grain which we had planned to feed to the animal. While a diet with a larger proportion of cereals may not be to our liking and may be less desirable from a nutritional point of view, the possibility of this shift gives a nation with a large livestock population a tremendous buffer for poor crop years.

CONTRIBUTIONS OF FARM SECURITY ADMINISTRATION BORROWERS TO AGRICULTURAL PRODUCTION GOALS

The Corn-belt States

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THIS discussion deals with the states of Illinois, Indiana, Iowa, Missouri and Ohio which are included in Region III of the Farm Security Administration. With less than nine percent of the total land area, one-sixth of the farms, and twenty-one percent of the crop land of the United States, this area produced in 1941: 22 percent of the Nation's milk supply, 25 percent of its cattle and calves, 26 percent of its poultry and eggs, 52 percent of its pork, 20 percent of its alfalfa and hay, 50 percent of its corn, and 90 percent of its soybeans.

Production goals announced for 1942 by the Department of Agriculture emphasized the important position of mid-west states in the production of food. For the states of Illinois, Indiana, Iowa, Missouri and Ohio, 1942 production goals called for an output above 1941 estimated production of approximately six percent more milk, seventeen per cent more pork, eleven percent more eggs, ten percent more poultry, six percent more beef and an increase of forty-two percent in the acreage of soybeans to be harvested as beans. The increases set forth in these production goals for this area constitute approximately twenty-four percent of the increased production of milk for the Nation, fifty percent of the increase in pork production, twenty-six percent of the increase in egg production, twenty-five percent of poultry meat increases, and sixty-seven percent of the increased soybean acreage. The contribution expected of these states toward production increases in 1942 indicates approximately the ratio of total production from these states to the total national farm output of these products.

In spite of the general productivity and modern farming in the area, it includes many thousands of farmers who cannot or, at least, have not been able to take advantage of production opportunities offered. This is the group with which Farm Security has been working, the group which it has been assisting with the combination of credit and guidance to improve its level of living and increase its production.

In the light of wartime demands for food and fiber, it was early apparent that the shortage of manpower would be a limiting factor in any all-out production program. Accordingly, a special effort was made through supervision and production loans to get each Farm Security Administration borrower and each farmer who applied for a Farm Security Administration loan for the first time to produce to the maximum of the labor available in his family.

The figures in Table I reflect production increases on farms of Farm Security Administration borrowers which are from two to

TABLE 1. PRODUCTION PER ACTIVE STANDARD BORROW FARM IN 1941 AND 1942. FSA REGION III

	Average Production per Farm		Increase, 1942 over 1941	
	1941	1942	Quantity	Per cent
Milk, gal.	2585	3013	428	17
Pork, lbs.	3089	4005	916	30
Eggs, doz.	506	638	132	26
Beef, lbs.	946	1254	308	33
Chicken, lbs.	301	380	79	26
Soybeans, bu.	41	80	39	95

five times as great as the increases which would be required of the average farmer in order to reach the national war goals for 1942. Increases of this magnitude reflect a real achievement whether measured in terms of economic progress of the farm family, improved farming practices, or total production. This record was achieved in spite of the fact that Farm Security Administration borrowers operated farms that were smaller than the average commercial farm and that the quality of land is generally poorer. The handicaps of poorer soil resources, inadequate buildings and a higher percentage of tenancy among Farm Security Administration borrowers than among all farmers are no less important in an all-out production effort than the lack of euqipment, livestock and feed, inadequate knowledge of and training in the technical phases of livestock and crop production, and limited experience as managers of commercial farm units.

On the favorable side, Farm Security Administration borrowers generally have at their disposal a labor supply which is large relative to land and capital resources. The age distribution of Farm Security Administration borrowers differs from the age distribution of all farm operators in that it includes a higher proportion of

younger operators in their more productive ages. In addition to having at their disposal the services of state and federal agencies available to all farmers, Farm Security Administration borrowers have received operating loans based on an analysis of their resources, have prepared farm and home plans as operating guides, kept records of production, income and expense and, at various times, throughout the year, were visited by Farm Security Administration supervisors who assisted them in solving farm and home management problems. In 1942 a considerable number of borrowers were

TABLE 2. PRODUCTION INCREASES ON FARMS OF ACTIVE STANDARD BORROWERS OF FSA IN REGION III COMPARED WITH PRODUCTION INCREASES CALLED FOR IN 1942 USDA WAR GOALS

	Increased Production per Borrower	Total Increase in Production for 60,205 Borrowers (000's)	Total 1941 Production All Farms (000's)	1942 USDA War Goals (000's)	Goal Increase (000's)	Increase Achieved by FSA Borrowers as Per Cent of Goal Increase
Milk, gals.	428	25,692	2,822,929	3,005,815	182,886	14.0
Pork, lbs.	916	55,488	9,185,619	10,200,243	1,014,624	5.5
Eggs, doz.	132	8,017	922,501	999,501	77,000	10.4
Beef, lbs.	308	18,536	4,315,270	4,583,021	267,751	6.9
Chickens, lbs.	79	4,731	739,009	815,800	76,791	6.2
Soybeans, bu.	39	2,318	95,581	133,820	38,239	6.1

located on larger and more productive farms than those which they operated in 1941 and therefore were in a position to produce more.

In terms of total production, the contribution of Farm Security Administration borrowers has a special significance during this period when every effort is being exerted to achieve maximum production. On June 30, 1942, active standard borrowers using Farm Security Administration credit and operating under a program of general supervision numbered 60,205 in this area or five and one-half percent of the number of farmers reported in the 1940 census. Based on a preliminary summary of the November survey of 3805 operators selected at random, the five and one-half percent of the operators who were Farm Security Administration borrowers produced 14 percent of the milk production increase called for in the 1942 national war goals and a considerably higher proportion of total actual increase in milk production. In egg production, the increase contributed by borrowers amounted to 10.4 percent of the increase called for in 1942 goals. In the production of beef, chick-

ens, and soybeans, Farm Security Administration borrowers produced only a slightly larger proportion of the increase than their numbers bear to the total number of farms. Increases in pork production by borrowers amounted to 5.5 percent of increases asked for in the goals.

The survey further reveals that milk production was increased on 62 percent of Farm Security Administration borrowers' farms in 1942, pork production increased on 68 percent of the farms, and egg production on 62 percent, and that 1941 production levels were maintained on 23, 12, and 24 percent of the farms for these products respectively. Decreases in production were more frequently noted near urban areas in Indiana and Ohio where industry gave more opportunity for off-the-farm employment than in other parts of the region.

Borrowers of the Farm Security Administration have labor available for a further expansion of production in 1943. During the past year, 38 days of work was performed off the farm for pay by the head of the average borrower family and a total of 58 days of off-farm work was performed by the family as a whole. The extent of off-farm work in 1942 was undoubtedly larger due to the attractive wages in industrial plants but a considerable amount of off-farm work was reported by operators in areas that are primarily agricultural.

The labor performed by Farm Security Administration families in industry or on other farms may have resulted in a greater income to the family than the same labor applied to their farms. It appears that further increases in production from borrower farms can be anticipated if the problems of labor distribution, capital and managerial deficiencies can be overcome.

The experience of Farm Security Administration in 1942 demonstrates, in the opinion of the authors that a supervised loan program to assist the small farm operator who is not fully utilizing his labor can accomplish increases in production which can be secured in no other manner. As we go into 1943 with the larger commercial farmer already close to maximum production, it is from the small farmer that we must get an even larger percentage of our increase in production. There are many times the sixty thousand farmers with which Farm Security Administration worked this year in the corn-belt states who could be assisted to increases similar to those reported, if they could be given guidance and credit based on an analysis of their human and land resources.

THE INFLUENCE OF MANAGERIAL ABILITY AND SIZE OF FARM ON THE EFFICIENCY OF AGRICULTURAL PRODUCTION

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THE size of farm and the managerial ability of the operator are important factors that influence the efficiency of agricultural production. It is relatively easy to over-emphasize the importance of size of farm and to perhaps neglect to mention the ability of the man responsible for the organization and operation of a particular farm.

In much farm planning the tendency is to set up a plan that will call for a farm of sufficient size to make for efficiency of operation.

TABLE 1. RELATION OF TILLABLE ACRES TO FARM EARNINGS ON FARM ACCOUNTING FARMS IN TYPE-OF-FARMING AREA 2, MICHIGAN, 1935–39

Tillable acres		Number of farms	Labor income
Range	Average		
Less than 80	63	76	$ 404
80–109	94	99	583
110–139	124	121	674
140–169	153	89	938
170–199	178	43	1,029
200 or more	249	83	1,050

The plan may call for a considerable increase in the acreage and on paper the plan looks fine and workable. However, it is a mistake to forget that the plan may have been suggested for a man who has already demonstrated his inability to manage a small business, let alone one greatly enlarged. This type of farm planning would be as much of a mistake as recommending registered livestock to a farmer who has failed to handle grade stock efficiently. Plans may provide for ways and means of enlarging the size of farm, but they may fail to provide a plan for increasing the managerial ability of the farmer.

The number of acres is a measure of size of farm, but it seems that perhaps we should be as much concerned about size of business as size of farm, when thinking about efficiency of agricultural production. When thinking of size of business, acres is only one measure of

size and as a universal measure it is unsatisfactory. The number of productive man work units provided by a farm business is a much better measure. It is, of course, recognized that on the average the larger size farms are more efficient than the smaller ones. In Table 1 is shown the relation of tillable acres to labor incomes on farms in one of the type-of-farming areas of Michigan.

Table 1 shows that as the size of farms increased the labor incomes increased. This is an indication of increased efficiency of agricultural production as the period of 1935–39 was somewhat of a normal period when labor incomes reflect production. It must be

TABLE 2. RELATION OF PRODUCTIVE MAN WORK UNITS AND SIZE OF FARMS TO FARM EARNINGS ON FARM ACCOUNTING FARMS IN AREA 2, MICHIGAN, 1935–39

Item	Less than 100 til. acres		100–159 til. acres		160 or more til. acres	
	Prod. man work units		Prod. man work units		Prod. man work units	
	Low half	High half	Low half	High half	Low half	High half
Number of farms	72	73	104	106	77	79
Total acres	102	120	155	176	244	320
Tillable acres	69	83	124	132	192	234
Prod. man work units	257	409	334	552	476	738
PMWU per til. acre	3.7	4.9	2.7	4.2	2.5	3.2
Gross income	$1,479	$2,509	$2,146	$3,671	$3,316	$5,908
Labor income	279	684	399	990	796	1,365

remembered, however, that these labor income figures are averages and that perhaps a further analysis would show a weakness in the conclusion that might at first be made from the above table. Table 2 will serve to illustrate the variation in size of business on farms of similar acreages as well as on farms of different sizes.

The data in Table 2 show that one-half of the farms in each of the different size groups were organized so as to provide over fifty per-cent more productive man work units per farm than the other half of the farms. This alone illustrates that acres is a poor measure of size of business and is not, when used alone, a satisfactory measure of production efficiency.

The one-half of the small farms with the most productive man work units averaged 83 tillable acres and these farms were organized to provide 409 productive man work units. In contrast to these,

the one-half of the medium sized farms with the fewest productive man work units averaged 50 percent more tillable acres and only 82 percent as many work units as on the better organized group of small farms. The labor incomes on the better organized small farms were also higher than on the poorly organized farms 50 percent larger. This variation in organization is brought about to a large extent by differences in managerial ability of the operators.

During the past decade or so the tendency has been to expand the acreages operated, and little attention has been given to intensifying operations. In many cases additional acres have been added

TABLE 3. RELATION OF INTENSITY OF BUSINESS AND SIZE OF FARM TO FARM EARNINGS ON FARM ACCOUNTING FARMS IN TYPE-OF-FARMING AREA 2, MICHIGAN 1935–1939

Productive man work units per tillable acre		Number of farms	Tillable acres	Total PMWU	Gross income	Labor income
Range	Average					
Small farms (less than 130 til. acres)						
Less than 3.0	2.7	51	102	279	$1,597	$ 296
3.0–3.9	3.4	94	100	339	2,167	441
4.0 or more	5.1	118	86	437	2,874	821
Large farms (130 or more til. acres)						
Less than 3.0	2.4	125	203	481	$3,406	$ 683
3.0–3.9	3.3	92	177	586	4,448	1,086
4.0 or more	5.3	31	157	828	5,449	1,470

to the business but no other changes have been made to keep the business balanced. The increased use of power machinery in the handling of larger acreages of certain crops has tended to hasten the swing toward larger acreages in some areas. This trend could well be expected as there has not been the increase in efficiency of handling livestock as has been true in the case of crops.

The extent to which different size farms are intensified and the farms that offer the greatest possibilities for further intensification are shown in Table 3. The farms of 86 tillable acres with 5.1 productive man work units per tillable acre produced a gross income of $2,874 and a labor income of $821 per farm. On the other hand, the farms that averaged 203 tillable acres and only 2.4 man work units per tillable acre produced a gross income of $3,406 and a labor income of only $683. It, of course, goes without saying that when the

larger farms were intensified there was opportunity for increased efficiency.

A point that would be well to note, is that of the 263 records represented in the group of small farms 45 percent of them were in the group most intensively organized. In the group of 248 larger farms, only 12 percent fell in the well-organized group and 50 percent in the poorly organized group. This would tend to indicate that the greatest opportunity for increased production would be on the larger farms that are operated on a very extensive basis. The smaller farms through necessity have had to operate more nearly to capacity to make a living, while on the larger farms it was

TABLE 4. RELATION OF FARMER'S ABILITY AND SOIL PRODUCTIVITY TO VARIOUS FACTORS ON FARM ACCOUNTING FARMS IN AREA 5, MICHIGAN, 1933–38*

Class of farmer	Number of farms	Total PMWU	Number of men	PMWU per man	Gross income	Gross income per man	Labor income
			No. 1 Soil				
A	87	497	2.0	248	$4,452	$2,226	$1,503
B	46	390	1.7	229	2,754	1,620	1,049
C	33	419	2.1	200	2,632	1,253	378
D	5	212	1.2	176	1,536	1,280	148
			No. 2 Soil				
A	153	551	2.0	276	$4,114	$2,057	$1,270
B	203	440	1.8	244	2,860	1,589	640
C	130	408	1.8	227	2,454	1,363	519
D	33	298	1.3	234	2,534	1,949	431
			No. 3 Soil				
A	90	547	2.1	260	$3,887	$1,851	$1,114
B	109	401	1.7	236	2,497	1,469	584
C	50	390	1.6	244	2,267	1,417	358
D	40	354	1.8	197	1,828	1,016	104

* K. T. Wright, Farm Management Department, Michigan State College, from unpublished data in his doctor's thesis at Cornell University.

possible to operate much below capacity and still continue in business.

It is difficult to determine scientifically the influence of managerial ability on various factors in the operation of a farm business. However, some studies were made in an attempt to measure the importance of the management factor.

When making the study the County Agricultural Agents classified the farmers in the Farm Accounting Project into four classes—A, B, C, and D farmers. The practices followed in soil management, the cropping program, livestock practices, and general business ability of the farmers were taken into account, when making the classification.

The variation in the productivity of soils cause for differences in incomes so before trying to measure the influence of managerial ability the soils were grouped into three classes. The farms were sorted first according to the class of soil and then the farms on each class of soil were sorted according to the class of farmers. This study was made in a number of type-of-farming areas in Michigan. The results shown for farms in the General Farming Area of central Michigan are shown in Table 4.

The "A" farmers showed the highest incomes on the No. 1 soil, but their incomes were relatively good regardless of the quality of soil. The "C" and "D" class farmers, however, failed to show satisfactory incomes on any of the soil classes. In fact, the incomes of the "C" and "D" farmers were no higher on the No. 1 soil than on the lower grade soils. The same general picture is shown in every type-of-farming area in which the study was made.

The average of the "A" farmers accomplished 261 productive man work units per man, while the "D" groups averaged only 202 work units. The "A" group not only accomplished 29 percent more work per man, but they also produced a gross income of 49 percent more per man than the "D" farmers. Consequently the managerial ability of the farmer is an important factor influencing the efficiency of agricultural production.

CONTRIBUTION OF FARM MANAGEMENT RESEARCH TO ATTAINMENT OF PRODUCTION GOALS

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I

THOSE engaged in farm management research have been admonished to "gear" their projects to the war effort. This means, in effect, the collection and analysis of data which may be helpful to the farmers in making the transition from a peacetime to a war economy. If this admonition is to be taken seriously, then the first question which arises is this: How has the war affected or is likely to affect the production of agricultural products?

It is now known that one important effect is the radical change in the rate of producing essential farm products. This change in the rate of production has come about in two ways. First, all agricultural commodities have been classified as either essential or nonessential. This classification would by itself bring about definite changes in the rates of production, since farmers are being urged and encouraged in various ways to produce only essential products. But this has not been the only force affecting the rate of change. There is a greater demand for some products than for others within the essential group. For example, emphasis has been placed on the production of fat and oil bearing commodities, and in some instances the rate of change in this group is phenomenal.

This variation in the rate of production complicates the farmer's production problem. If the demand were uniform for all essential products, the problem of the farmer and that of the research worker would be simplified. But, since this is not the case, the farmer is faced with the task, and in some instances a very difficult one, of *reallocating his resources*. The research worker in turn, has the task of suggesting how this reallocation can best be made without financial loss to the farmer and at the same time getting the needed products produced. This, indeed, may be an impossible task but is one to which the research worker must direct his attention.

The second major effect of the war effort is equally clear. The farmers have been asked to increase production with less labor, fertilizer, seed, equipment, and power. This means that not only must the farmer face the problem of reallocation of resources but

also more than ever before he must give attention to the problem of economizing his cost goods. It is true that these two problems are inter-related, but for the purpose of effectively aiding the farmer they should be considered separately.

The war effort has re-emphasized the problem of scale of production. Since farm labor, materials, equipment, and power are becoming scarcer, it has been suggested that production of essential farm commodities should be transferred from the small "inefficient" producer to the large producers. This would permit, so it is said, a better use of available farm resources and a larger output of essential farm commodities. This suggestion is attractive and no doubt has some merit. It also has definite limitations. It is not an easy task for a farmer to increase his scale of production, since farming is subject to diminishing returns to scale in much the same manner but to a greater degree than urban industries. Hence, it is by no means true that if the scale of operations is doubled the output will also be doubled. It is for this reason then that some attention should be given to relationship betweeen scale of operation and output.

The war has affected the trend of costs and prices. In most cases costs and prices have advanced but not at the same rate. What effect will these changes have on production? It is clear, for example, that if the cost of labor increases more rapidly than other costs, this would seriously affect the production of some products but not that of others. It would affect materially the production of those commodities requiring a relatively large amount of hired labor, such as truck crops. It would not affect to the same extent the production of commodities which are normally produced with unpaid family labor, although it is evident that the war has also affected the supply of family labor.

The problem of prices and costs is important for still another reason. It is important that the relation between these two should be such as to stimulate the needed production now, but not such as to exhaust the resources of the farm, or to cause an over expansion of the agricultural plant. There is also the danger that agriculture will be forced into patterns which, although desirable now, may be quite undesirable when the war is over. For example, in our effort to obtain a large increase in the production of peanuts, farmers outside of the peanut producing areas are being asked to grow peanuts. This "habit" may persist after the war when the demand for

peanuts may be greatly diminished. The prices of peanuts just before the war were not such as to generate any optimism about prices after this war unless these new areas can be induced to desist from the production of peanuts.

There are, then, four major areas of farm management research which have been intensified as a result of the war: (1) reallocation of the farm resources in the production of essential products, (2) economizing of scarcer cost goods, (3) scale of operation as related to production, and (4) the pricing of cost goods and farm products. What specific suggestions can be made as to the types of research which might be desirable in each of these areas?

II

The problem of allocation of resources is non-existant when the farmer is producing a single product. But when several products compete for the use of the farmer's resources, this problem becomes difficult, increasing as the number of enterprises included in the farm organization increases. The principle which guides the farmer in using his land, labor, equipment, and supplies is to distribute these to the various enterprises in such a way that the marginal net returns (per unit of resources) are the same for all enterprises. When this feat is accomplished, the farmer receives the maximum net returns from his total effort. That the farmer uses this principle is always evident. For example, if a farmer is asked why he did not use 300 pounds of fertilizer on crop A instead of the 200 actually used he will reply "it would not pay to do so." That is, the extra 100 pounds of fertilizer or its equivalent in other resources could be used more effectively, according to the farmer, on some other enterprise. Thus, by "trial and error" the farmer allocates his resources to the various enterprises so that the marginal net returns are equal.

What types of research are needed to solve the problem of reallocation? First, it is essential that each research worker should become familiar with the techniques of marginal analysis. Under normal conditions it is impossible to determine for each enterprise how the marginal production or marginal net returns are likely to behave. But it is important for the research worker to understand how they might behave. This is especially significant when he is forced to use conventional cost of production data. Suppose, for example, that past results show that for four enterprises the average net returns per acre are as follows: Enterprise A, $10; B, $5; C,

$3; and D, −$1. It is apparent, from these data, that if a 100 percent increase is requested in B the increase in acreage would be taken from C and D. But such conventional cost data are of little or no help, and may be positively misleading, in any problem involving a drastic reallocation of resources. The reason is that actually D is not a non-profit enterprise; if it were, it would not have been retained in the original combination of enterprises. What has occurred is that in calculating net returns the cost rates have been uniform for all enterprises. And since D could not pay these rates it showed a loss. However, the farmer knows that income from D does cover the variable cost and a part of the fixed costs. It is for this reason that D is retained in his organization.

When conventional cost data must be used, it would be better to rate the enterprises on some other basis than net returns. For example, they could be rated on the return over cash cost per hour of labor used or return per dollar of variable costs.

Another method of procedure, and probably the most accurate, would be to prepare several tentative combinations of enterprises, for different size groups, for the purpose of determining which combination would give the greater return over variable cash costs. This method will not be absolutely reliable because the most profitable enterprises will tend to occupy a position in the organization which cannot be maintained. For this reason, each combination should be tested against a labor distribution chart.

It is realized that these methods will not yield the information required for marginal analysis, as applied to individual farms. Such information is not now available and it is doubtful if it can be made available except, to a limited extent, through planned experiments showing the effect on production of varying amounts of fertilizer, seed, or some other variable factors. The important thing is to avoid using farm management data which purports to yield the necessary information for marginal analysis. An example will make this point clear. It has been found on numerous occasions that for different farms the cost per unit decreases as output increases. Charts have been prepared showing this relation between cost per unit and yield. These data have been used to illustrate the laws of increasing and diminishing returns. If the relation is negative, i.e., cost per unit is declining, then it has been said that the farmer in order to decrease his unit costs should increase his yields. This, of course, is incorrect. Each individual farmer may be producing at the lowest cost for his

conditions and any attempt to increase yields, instead of reducing the unit cost would increase it. This is an erroneous use of data taken from a number of individual farms, which are in no sense identical, and then applying the results to a specific farm. To state accurately, in any given case, whether or not a farmer could or could not decrease his unit costs, it would be necessary to know the relation between inputs and outputs for each farm over a wide range of inputs for each enterprise.

III

What type of research, it may be asked, should be conducted to assist the farmer to economize his cost goods? This is a pertinent question, since some of these goods at present are becoming scarcer and, in spite of this growing scarcity, are not being fully utilized. In considering this problem, it should be kept in mind that economizing resources is not necessarily independent of the problem of reallocation. Methods devised to economize resources will undoubtedly force a reallocation of the resources of the farmer. This thesis may be clarified by an example. Suppose, for instance, that a method is devised to use labor more effectively. That is, a unit of labor is made to produce more products or less labor is used to produce a unit of output. The labor "saved" can be used to expand this enterprise; it may be used to increase the output from any other enterprise; or the labor "saved" may not be used at all. In short, the problem of reallocation emerges when "factor-saving" devices are put into use. The "saved" labor, if used, will be allocated to all enterprises in a proportion which will equalize the marginal product of the labor. The result will be a general rise in the level of production of all enterprises.

One way of economizing a resource is through a process of supplementation. An illustration of this method is found when labor is supplemented by capital in the form of tools, equipment, power, or materials. The association of these with labor permits its fuller utilization, and hence increases its production power.

A factor of production may be economized also by improving the methods or techniques by which the factor is used. An illustration of this type of economizing is found when seed is spaced in the row, or when fertilizer is distributed in bands on each side of the seed or plants. By such devices both the seed and the fertilizer are econo-

mized since the output per unit of each is increased or less of the factors are used per unit of output.

It often occurs that the effectiveness of a factor of production depends upon when it is used. The production of a crop is influenced by the selection of the time of planting as well as by the methods used in planting. The quantity and quality of a crop are also affected by its condition at the time of harvest. The quantity of milk is affected by the regularity of the milking time. The production of eggs is conditioned by the care exercised in both feeding and handling of the birds.

These are but a few of the many ways by which a factor of production can be made to yield a greater output per unit. And since many of them are significant, the research worker can well afford, at this critical period, to give them more than passing attention. Specific projects, usually in cooperation with the agricultural technicians, should be designed to study the ways of economizing the factors of production, especially those methods and techniques used on the critical processes or farm operations.

IV

The production of essential farm products is not solely one of reallocating the farmers' resources or of using more effectively the scarcer factors of production. The task involves the scale of production. It has been suggested, as already noted, that the larger farms, since they are more "efficient" than the smaller ones, should be given the task of producing the bulk of the needed increase in production. In short, the small farms should be liquidated and combined with the medium and large farms. This suggestion is apparently based on the idea that there is no such thing as diminishing returns to scale. Or that the scale of operations can be increased without diminishing the rate of production. This, of course, is not true. Indeed, as Schickele has pointed out, the smaller under-improved and not highly commercialized farms may produce more added products for a given expenditure than the large fully developed commercial farms.[1] And Rudd and MacFarlane in a stimulating discussion of scale have shown that risks increase with scale.[2] These two ideas should check any enthusiasm for the large

[1] JOURNAL OF FARM ECONOMICS, Vol. XXIV, No. 2, May 1942 p. 447.
[2] Ibid., p. 420.

farm as a solution of our production problem. For, if the smaller farms are less fully developed, because of the lack of capital, and if risks increase with the size, then it would appear that the small and medium size farms should be given special consideration in our efforts to increase the production of essential farm products. But the large farms should not be neglected. There are many large farms which are not fully developed and which may be made to yield more production. Indeed, the rate of increase may be as great as that which may be obtained from the small and medium size farms.

In considering the problem of scale it is not always the rate of increase which is important but the total potential production. McPherson, Sayre, and Greene[3] found that the rate of increase in the production of peanuts was higher on the small and medium size farms than on large farms. The smaller farms, however, contained only 32 percent of the total cropland in the county in which they were located. Thus, the large farms, although their rate of increase in production was less, were much more important as potential producers of peanuts than the small farms.

The problems associated with scale of production can be studied effectively by using the survey-budget method.[4] The procedure is rather simple. The forms used are essentially the same as those used in making farm management surveys, except that provisions are made for estimates as to changes which the farmers believe can be made in the enterprise combination, the reallocation of resources and costs. From the data obtained, tentative farm plans for each type of farming and major size groups can be developed. These tentative plans should then be discussed with groups of farmers for the purpose of getting their judgment as to the feasibility of the plans and of eliminating any gross errors or defects.

V

Prices and costs play important roles in any attempt to increase farm production since the farmer, as an entrepreneur, reacts to prices and costs in planning his production program. If he is requested to increase the production of specific crops or farm products he will ask—"at what price?" He is also concerned about

[3] Producing Peanuts for the Nation's War Needs N. C. Agr. Exp. Station in cooperation with the U.S.D.A., Raleigh, February, 1942.

[4] See Recent Developments in Farm Management Research Techniques, G. W. Forster. Proceedings of Agr. Economics and Rural Sociology Conference, N. C. State College, Raleigh, N. C., 1941.

prices of cost goods, especially those he has to buy. The Federal Government, realizing the importance of these problems, has announced minimum prices for essential farm products.[5] These prices are not, it is true, guaranteed but they will be supported by Government purchases, loans, or other devices. The Federal Government also realizes, but apparently to a somewhat lesser extent, the need for sufficient farm labor, machinery, tools, and supplies to produce and harvest the production requested.

The question immediately arises as to the adequacy of the Federal "price-cost" program. Are the prices offered sufficient, considering the conditions under which farmers are now working, to obtain the necessary production? There is the question also of providing the farmer with an adequate supply of labor, materials, and equipment. It is quite obvious that a high price by itself may not stimulate production if the farmer is not able to get the needed cost goods. Indeed, it might be possible to get a greater production response at somewhat less than the announced prices, if the cost goods could be supplied in adequate quantities.

It is clear, then, that this "price-cost area" is a fruitful one for research in that it may be possible to discover how prices stimulate the production of specific commodities and how badly farmers need labor, supplies, and equipment. Such research may also indicate how a given price may be made more effective if accompanied by a program of supplying farmers with the means of production.

The customary methods used in determining the response of production to changes in prices from past data are not applicable today. There are at least two reasons why this is probably true. During the past ten years government programs of one kind or another have destroyed the normal relationship between production and price for many farm products. Then, too, the increase in production demanded today may be several times that which the farmer has experienced in the past, and as a result his production response is not known. For these reasons it is necessary to devise other methods of determining the farmers' reaction to price stimuli.

The most effective way of determining the effect of government supported prices is to study the behavior of individual farmers. This may be done by selecting an adequate sample of farms producing the product or products, the behavior of which is the object

[5] Minimum prices currently paid by the Department of Agriculture, U.S.D.A. Bureau of Agricultural Economics, Nov. 6, 1942.

of the study. These farms should be selected so as to represent all size groups and major types of farming or combinations of farm enterprises. This is no longer a difficult task since the techniques of selecting the farms have been developed.[6] The farms selected can be studied by the survey-budget method. From the data obtained it is possible to determine, by size groups, how farmers are responding to supported prices for any type-of-farming or combination of farm enterprises. This is a significant determination since it is important to know just how much each size farm is contributing to the total production and how each responds to the same price stimuli. This method would yield also information as to the needs of each group of farmers for labor, materials, and power which could be used first to set up practices, and second to distribute labor, etc. where they would do the most good or maximize production.

This technique or method of study could be amplified by adding to the schedule certain questions designed to obtain some idea as to the farmer's response to price changes. For example, farmers might be asked what changes they would make in their production plans if the present price of a product were increased by a given percentage. The percentage breakdown should be small, say 10 percent. Thus a farmer's reaction could be obtained for 10 percent, 20 percent, etc. until no further increase was suggested for the product. In a like manner, the farmer's response could be obtained for each commodity, if it were important to the war program. The response of the various farmers could then be analyzed to determine the price or prices which would have to be paid to get the needed output.

It would be possible also to determine from an analysis of such data just how the price should be paid. It is by no means true that a uniform price paid to all producers would get the same production response as compared to a price paid for a basic quantity of product plus a bonus or additional price paid for an additional quantity above the basic amount. The reason why the method of payment is important is that all farmers do not respond in the same manner to price changes. It has been noted, for example, that under certain conditions farmers will produce more when prices are low than

[6] Techniques used in Analyzing Farm Management Problems on an Area Basis R. E. L. Greene, Proceedings of Agricultural Economic and Rural Sociology Conference, N. C. State College, Raleigh, N. C. 1941.

when they are high. It has also been observed recently that some farmers, after having harvested sufficient product to get their customary income, let the balance of the crop rot in the field. In such cases as these the farmer should be paid only if he actually harvested the total crop. That is, the added income would not be obtained by a higher price for a smaller quantity, but a higher price for a higher quantity.[7]

This discussion has been directed, not to specific research projects, but to areas of research in farm management, more specifically to the reallocation of the farmers' resources under war conditions, the economizing of cost goods, the relation of scale to the production of essential products, and the effect of changes in prices and costs on production. These areas are important because of the demands which are now being made for the production of specific farm commodities. These demands mean, in many cases, a major change in the way farmers have been using their resources. For this reason, special attention needs to be given to the research to each of these areas and to the research methods employed. Although material already available may be used to help farmers solve their production problems, it will be necessary to modify the research procedures which have been used formerly. Recent methods which have been developed, especially what is here called the survey-budget methods, appear to be well adapted to the study of farmers' wartime production problems.

[7] See discussion of this problem by Stephen Enke, JOURNAL OF FARM ECONOMICS, Vol. XXIV, No. 4, pp. 883–889.

THE IMPACT OF WAR ON MARKETING FARM PRODUCTS

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ALTHOUGH agricultural production was vitally affected by the war long before the United States became embroiled, it was not until the advent of price ceilings in the spring of 1942 that important changes in marketing occurred. Since then developments have been rapid, and it appears that the eventual adjustments to be made in the field of marketing and transportation will be even more far-reaching and revolutionary than those in agricultural production.

Merely to list all of these developments would fill the space allotted to this paper. The newspapers, trade journals, and radio commentaries are full of such details, and even if the economist is too busy to digest the daily grist his wife is likely to bring him up to date over the breakfast Postum. Moreover, conditions change so rapidly that data and specific descriptions quickly become obsolete, and a mere chronology of such fleeting events is quite unsuited for publication in a permanent record like the JOURNAL.

Rather, the purpose of this paper is to present an evaluation of some of the more significant and lasting impacts of the war on marketing agencies, methods and costs, insofar as these can be discerned in the present inconclusive phase of development. The broad scope of the paper precludes the presentation of many data which have been taken into account in these evaluations.

The impacts under consideration arise principally out of two concomitants of war: (1) food "shortages" and attendant Government controls, including price ceilings and rationing; (2) shortages of labor, transportation, equipment and materials. But the patterns of effects of these shortages on different commodities and types of agencies are so lacking in consistency as largely to frustrate any attempt at a functional organization of the subject matter and to make difficult broad generalizations.

Volume of Marketings and Food "Shortages"

The most widely recognized impacts of war on the marketing of farm products have arisen out of our inability to provide fully adequate supplies of foodstuffs for military, lend-lease and civilian

use. Total food production in 1942 was around 11 percent greater than in 1941 and about 27 percent greater than the average for 1935–39. But the supply available for domestic civilian consumption, on a per capita basis, was slightly less than in 1941, although approximately 10 percent greater than the average for 1935–39. Although the situation will not be as favorable in 1943, it still is likely that civilian supplies of most foodstuffs will be not far from pre-war quantities.

During 1942 a number of food "shortages" developed, particularly of meats. Actually, there was no meat shortage in the sense of fewer pounds of meat available for use. Meat production, in fact, was considerably greater in 1942 than in 1941 or than during the pre-war period 1935–39. Production in the latter years averaged about 16 billion pounds, whereas in 1942 it topped 22 billion pounds. Even after allowing for military and lend-lease uses, consumers were left about 17.8 billion pounds in 1942 compared with an average of 16.3 billion in the period 1935–39. On a per capita basis, the figures are 137.2 pounds for 1942 and 126.3 for 1935–39. Thus, despite the talk of a shortage, the people as a whole really had more meat in 1942 than they normally did. The same was true of most important foods.

The appearance of a shortage of meat (and the same may be said of many other foods) arises mainly from three principal conditions. First, people have much more money to spend, with total consumer incomes in 1942 about 24 percent higher than in 1941 and 70 percent greater than the average for 1935–39. People who formerly got along without much meat and other of the more expensive foods have come into the market trying to buy them. In the second place, retail prices under Government-imposed ceilings could not rise much and thus discourage purchases by would-be buyers, as they would in peacetime under such conditions. As a result, we do not have as much of many items as people with their present augmented incomes are willing and able to buy (see Figure 1). In the third place, uneven ceiling prices sometimes have resulted in failure of the localities having low ceilings to receive their proportionate shares of the total supplies available for civilian use, making the over-all "shortage" appear very acute in those areas. This was particularly important in the case of meat.

To date, therefore, wartime supply and demand conditions have not resulted in a reduction in the volume of foodstuffs but instead

have brought a considerable increase. Although the proportion destined for military and lend-lease goes directly from the processor to the Government, the volume passing through wholesale and retail channels has increased in 1942.

The big increase in volume of marketings of some commodities has given rise to a number of important marketing problems. For

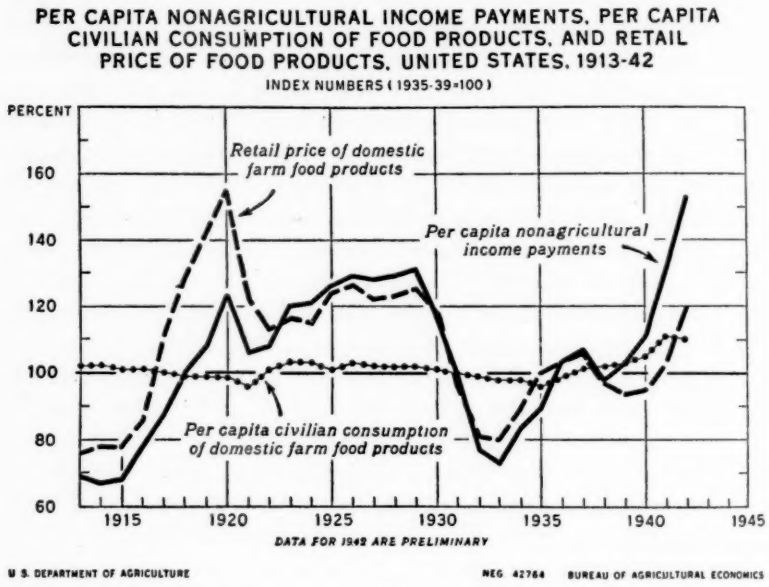

FIG. 1. PER CAPITA NONAGRICULTURAL INCOME PAYMENTS, PER CAPITA CIVILIAN CONSUMPTION OF FOOD PRODUCTS AND RETAIL PRICE OF FOOD PRODUCTS, UNITED STATES, 1913–42.

example, the crushing capacity for the greatly augmented output of domestic oilseeds is adequate for the country as a whole, but deficient in the central soybean and linseed area (see Figure 2). This will necessitate a considerable movement of soybeans to other areas for crushing. There have been misgivings, also, as to the ability of the livestock processing and transportation facilities to handle increased livestock marketings, particularly in the winter of 1943–44. Likewise storage facilities generally have been overtaxed. Difficulties in obtaining materials for expanding facilities have complicated these problems in connection with some commodities, and have been the occasion for much detailed work by public and private marketing officials.

These particular war impacts, however, probably will be mostly of temporary duration and may not greatly affect the longer-time trends in agricultural marketing. The situation will not be analogous to the expansion of agricultural production in World War I, when permanent grasslands were ploughed up to provide additional production of grains, thereby affecting agriculture for years

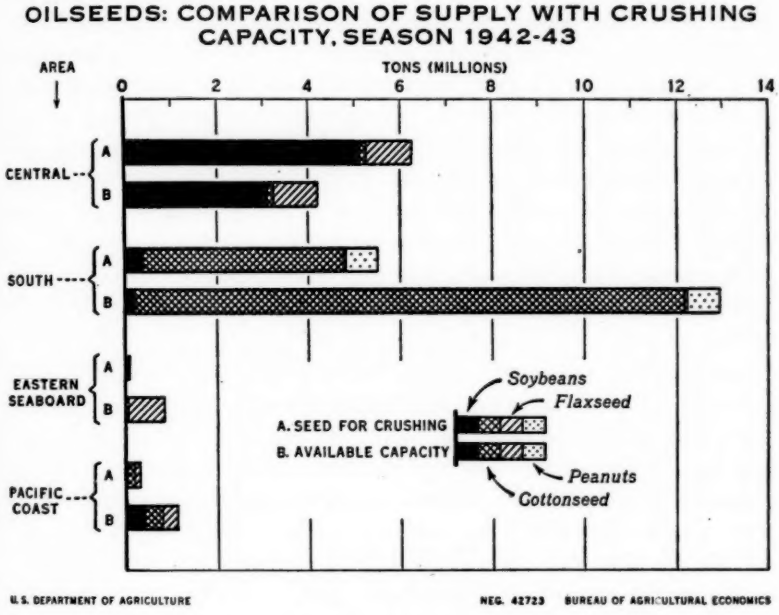

FIG. 2. OILSEEDS: COMPARISON OF SUPPLY WITH CRUSHING CAPACITY, SEASON 1942–43.

after the War. In most instances in the present war there is sufficient excess marketing capacity to handle the war-time increase in volume without greatly expanding existing marketing facilities. In this respect agricultural marketing facilities are in a markedly different position than many industrial facilities which have been expanded to care for war-time necessities. A conspicuous exception is found in the case of dehydrated foods.

Changes in Forms of Processing Products

Not only has the total volume of food marketings increased, but military and lend-lease requirements have brought new demands

for certain processed products, especially dehydrated foods which require little shipping space and can be easily stored without refrigeration. The expansion in the facilities for and the output of dehydrated eggs, meats, dairy products and fruits and vegetables no doubt will have important peacetime effects on consumption habits and marketing processes. Consumers in Great Britain are said to have accustomed themselves quickly to some of these unusual forms of processed foods, and the tastes of American soldiers also are being affected. When the war is over there is little doubt that civilian use of such products will be much larger than in pre-war years. It is conceivable, in fact, that the use of dehydrated products will greatly alter the methods of marketing of these commodities, with a reduction in the use of shell eggs, fluid milk and canned fruits and vegetables in favor of the dried products. This would affect the use of refrigerator cars, cold storage, canneries and produce marketing agencies. The eventual effects will depend in considerable measure upon relative costs, about which little is known at present. In filling wartime needs for these specially processed commodities little or no attention is given to the cost factor.

Other new products developed during the war which may become important in the post-war years include soybean and peanut flour, and canned and dried whole soybeans, which have unusual food values, especially as a partial substitute for meat.

Frozen Foods

A number of wartime shortages have combined to affect the frozen food industry, with more than usual potential carry-over effects into the post-war period.

Despite many rumors and even semi-official predictions to the contrary, the quantity of tin cans to be made available for packing fruits and vegetables in 1943 apparently will be sufficient to care for most or all of the production of raw materials which can be attained in view of labor and other difficulties. Canners appear to be making money during the war, after a rather unprofitable series of pre-war years, and no doubt will make every effort to maintain their volume of business. But requirements for military and lend-lease use have expanded so greatly that the amounts of canned foods remaining for civilian consumption, especially some items, will be materially reduced. This prospect, plus the increase in civilian demand arising from higher consumer incomes, has made it necessary to institute rationing of canned goods beginning early

in 1943. Moreover, if prospects for termination of the war should become less rosy during 1943–44 it may be necessary to curtail civilian consumption still further to provide stock piles against eventual exhaustion of tin supplies.

There are several ways in which the "shortage" of canned goods for civilian consumption might be offset, including expansion in the output of glass-packed, dried, dehydrated and frozen fruits and vegetables and in the marketings of fresh produce. Because of limitations on the use of critical materials for equipment and almost unlimited export requirements for dehydrated foods, only the expansion of frozen foods seems to offer much possibilities among these processed items for civilian use, although a new type of glass container closure may change this picture. But even much enlargement of the existing frozen food industry will be hampered by the difficulty of getting new equipment.

At the same time, the shortage of butterfat which developed in the latter part of 1942 necessitated limiting the output of ice cream, the initial reduction amounting to 20 percent of the quantity which otherwise probably would have been produced in the winter months affected. Although these limitations may be revised upward in the flush milk production season, the ice cream industry probably will continue to operate under great difficulties which also include the shortage of sugar, other materials and labor. A possible way in which many units of the industry might maintain their volume of business is by developing frozen fruits and vegetables.

Experiments already made by the Bureau of Agricultural Economics in cooperation with ice cream manufacturers indicate that it is quite practicable to use existing ice cream freezing equipment for the production of frozen fruits and vegetables of satisfactory quality. The distributing facilities of the industry are excellently adapted to the sale of such products. The possible bottlenecks are storage space for carrying the frozen products from the summer producing season to the winter consumption season, and the procurement of adequate supplies of raw materials of the right quality for freezing. The first of these obstacles perhaps may be overcome by using the storage facilities of the ice industry, since this space ordinarily is emptied before fruits and vegetables are harvested. Thus, if the raw material supply problem can be solved it may be that wartime necessity will develop a permanent new winter sideline business for ice cream manufacturers, representing an important contribution to the frozen food industry in peacetime.

Price Ceilings and Rationing

Countless protests and urgent pleas received from members of the food trade by congressmen and Government administrators furnish not-so-mute evidence that Government controls inaugurated to prevent inflation and to deal with the problem of food "shortages" described above are having important repercussions in the marketing system. Many of the former competitive elements in merchandizing food products have been radically altered.

These controls have affected the marketing system not only unavoidably by disrupting the usual competitive forces; by actual design, apparently, they have been used in an attempt to maintain some elements of the marketing system which might not have survived on a competitive basis under wartime conditions, and at the same time to foster the elimination of others. Price ceilings have been modified to encourage the continued operation of certain types of retailers, while in other cases they have been set in a manner which seemed designed to "freeze out" elements of the trade perhaps considered to be unnecessary or undesirable. Similarly, certain marketing practices have been discouraged. These moves probably represented, in most cases, inevitable concomitants of wartime controls. But they appear to have been made without any clearly defined policy with respect to the use of price ceilings for such purposes, or to the kind of marketing agencies and processes considered to be desirable or undesirable and hence to be perpetuated or eliminated. In peacetime the use of Government powers for such purposes would have been revolutionary. In wartime it is hardly noticed by the general public.

The "Squeeze" of Packers' Margins

These controls and their far-reaching effects may be illustrated by reference to the livestock and meat trade. Following the imposition of ceilings on pork prices in March 1942 prices could not rise to bring the usual adjustment of consumption to supplies of pork. The rather hastily improvised system of ceiling prices gave higher ceilings to some localities than to others, and to some groups of packers and retailers compared with their competitors. The sale of meat direct by packers to retailers was encouraged, making for extreme shortages in territories formerly served largely by meat wholesalers. The insistent demands of retailers upon their packer-suppliers for sufficient meat to supply their customers, particularly

in the East, caused packers generally to go out into the market and bid frantically for hogs in an attempt to meet these urgent calls. The resultant rise in hog prices reduced the margin between the price of live hogs and the wholesale value of hog products as customarily measured to a level much below normal, and in fact to what appeared on the surface to be a minus quantity. This bidding was accelerated by the fact that some packers had much better ceilings to operate under than did others, and may have found in the situation an opportunity to "put the squeeze" on their competitors, with a view to longer-time considerations of competitive policy.

Although many packers, particularly the smaller ones located in the East, threatened that they would have to go out of business in a short time if the squeeze continued, the record indicates that except in a few cases they continued to operate through many months of much-below-normal margins, and that the facilities going into idleness possibly represented little or no greater volume than facilities coming into operation for the first time.

There were several reasons for this difference between (bad) theory and practice. Like farmers during the great depression, some packers found it possible to continue operations at an actual loss by using up their capital resources. But a more important reason probably was that "normal" margins as ordinarily computed did not fully reflect the profit and loss situation, due to the increase in volume and consequent reduction in overhead costs experienced by many packers, and to the change in the proportions of the total output represented by different cuts and products priced at different levels. Nevertheless, the situation was sufficiently acute to have weakened for some time to come the competitive position of certain groups of packers, and possibly to have contributed to the general trend toward consolidation and concentration in the packing industry. Meat wholesalers, for a time at least, were threatened with extinction and some large retail handlers of meat found that their volume operations became a handicap rather than an advantage, since packers were not anxious to "take care of" such buyers who normally shopped around for price concessions. There is little doubt that some of these wartime developments in the meat trade will continue to affect the industry in the post-war period.

These conditions led to an insistent demand for ceilings on live hog prices, which were never put into effect, partly at least because

of opposition from producer groups. It is to be doubted, however, that such ceilings would have alleviated the situation nearly as much as the packers and other meat handlers seemed to expect. They would not have eliminated the inequities in price ceilings affecting packers, wholesalers, retailers and regional meat supplies. A loosely formulated system of ceiling prices on live animals, unless accompanied by a carefully worked out system of allocations of live hogs, might even have intensified the difficulties, since many packers located far from producing areas might then have been unable to buy hogs at all, and difficulties in marketing from the farmer to the packer would have been added to those already encountered in the meat end of the business.

Price Ceilings and Futures Trading

Still another effect of price ceilings is that on the futures exchanges. For some time there has been real question as to whether or not the exchanges were needed in view of the ceiling prices and support prices. These, together with the general demand situation, greatly reduce the degree of potential price fluctuation upon which speculation thrives and which justifies the existence of risk-taking agencies. Under these wartime price conditions it is difficult to maintain a sufficient volume of trading for profitable operation, and the public interest is less clearly served. An examination of price ceilings and support levels, however, indicates that price risks still are sufficient to warrant use of the futures markets for hedging purposes, and the markets may be able to survive.

Before the imposition of general price controls there was a rather widespread belief that the futures markets were contributing to the general rise in commodity prices, and hence constituted an inflationary element. Speculation in soybean prices, particularly, at one time appeared to be an undesirable element in the situation. Under present Government controls, however, the inflationary potentialities of futures trading have been greatly reduced along with the decrease in importance of the risk-shifting feature.

It is conceivable that experience with price supports and other price controls in wartime may lead to increased reliance upon such measures in peacetime, even to the extent of some system of "forward pricing" which has been advocated recently by certain economists. In that event, the futures markets will have been permanently and vitally affected by these war conditions, and in any

event it seems likely that they will feel the effects of the war for many years after it is over.

Effects on Retail Food Stores

Food retailing has been greatly affected by price ceilings and also by labor shortages and other wartime conditions. Contrary to a general impression which seems to exist, the volume of business of retail food stores has not been reduced in 1942, but rather has increased about 25 per cent in 1942 over 1941 in dollars and perhaps 5 per cent in physical volume.

The retail grocer's margin on many items was severely squeezed when "General Max" went into operation in the spring of 1942, freezing most prices at March levels. The squeeze arose mainly from the fact that prices had been rising for some time prior to March, and many retailers had not raised their selling prices to conform with replacement costs. Consequently, when new stocks were bought at higher wholesale prices the retailer was unable legally to up his retail price correspondingly. But the effects of this on store profits were not so great as the volume and intensity of the following squawks would have indicated. There are various ways of partially circumventing the effects of such squeezes. Margins on some uncontrolled items have increased. The increase in volume of business and resulting decrease in overhead costs per unit have helped to offset the effects of the squeeze on margins and the rise in labor costs.

Although few figures are yet available on 1942 operations, the net result of these conditions probably has been to make 1942 a profitable year for food retailers, despite the loud cries of anguish which have emanated from many of them. The available data point to a small net decline in the number of retail food stores in 1942, but this apparently does not reflect mortality due to financial failure. The number of stores removed from the list in July and August of 1942 as reported by Dun's Review was slightly less than in the corresponding months of 1941, but the number of new stores added was considerably under a year earlier.

Although some observers have predicted a very heavy mortality among food stores as the war progresses, with important carry-over effects into the post-war era, there is as yet little evidence to support this conclusion. It seems probable, however, that store numbers will be substantially contracted as rationing and labor diffi-

culties multiply. The number of new stores added will continue to decline because of better employment opportunities elsewhere and because new stores find difficulty in getting supplies from wholesalers who are unable to fill the needs of even their regular customers.

There are a number of reasons for concluding that the competitive position of the food chains compared with the independents has deteriorated somewhat during 1942, and this hypothesis is supported by the meager facts available. For the first 10 months of 1942 compared with a year earlier the chains and independents showed about the same percentage increase in sales, but this reflected a relatively larger increase for the chains in the early months and a smaller increase in the later months of this period. From 1939 through 1941 the increase in volume of business for the chains was much sharper than for the independent firms, and it now appears that this trend has been reversed in 1942.

The effects of the war on independents, chains and super-markets are conflicting. Price ceilings, reputedly observed more carefully by the chains, together with the distribution of supplies under price ceilings, seem to have definitely favored the independent stores over the chain systems. Moreover, the chains have a larger proportion of super-markets, which in the suburban districts apparently have lost ground. More people are going to the neighborhood stores for their groceries because of the saving in tires and gasoline and the fact that these stores with their relatively higher price ceilings have been able to stock goods sometimes unavailable in the larger markets. On the other hand, independent stores with delivery services have suffered from labor, tire and parts shortages.

Despite these tendencies the chains still are reducing the number of outlets and increasing average volume of business by eliminating the less profitable stores and by consolidation. One large chain system is reported to have tremendously reduced the number of stores, and there are rumors of 10 and 15 percent reductions by other systems in recent months. What is happening, apparently, is a hastening of tendencies previously observed in the reorganization of chain store systems. Despite the decline in automobile travel, the consolidation of chain outlets into medium-sized super-markets probably will be accelerated. We may be moving in the direction of "neighborhood super-markets" as opposed to either super-duper markets or the small hole-in-the-wall type of store.

Some chains, finding it possible to sell all the available goods in

fewer stores, are said to be closing stores in towns and cities most distant from their district warehouses, to conserve transportation equipment. This might leave some rural communities without adequate competition in retail food selling. Other food chains are reported to be considering the addition of more non-food lines to their stocks in their outlying stores, partly to supplement depleted food lines in prospect and partly because of the rumored closing of some of the smaller chain department and hardware stores.

Elimination of Services

A number of wartime conditions are contributing to the elimination of services in marketing. First in importance are the shortages of labor, tires, gasoline, delivery and other equipment.

Another factor operating to reduce services is the strong desire of the Government to maintain price ceilings in the face of higher prices to producers and the resulting "squeeze" on marketing margins. In the early stages of price control there was strong pressure for subsidies to offset the squeezes, but much opposition to such subsidies has developed and a vigorous effort now is underway to make possible the continuance of lower gross margins by reductions in costs through the elimination of nonessential services.

An example of the latter is to be found in the flour and bread-baking industries. Higher prices for wheat necessitated raising the ceiling on flour prices in order to keep the flour mills operating, since a proposed Government subsidy to offset the increase in the cost of wheat was frowned upon. The rise in flour prices would necessitate a rise in bread prices unless the margins of bread bakers could be reduced sufficiently to absorb the increase in material costs.

The bread-baking industry has been more or less notoriously addicted to extravagant marketing practices, including the consignment sale of bread to retailers and return of stale loaves, frequent deliveries, numerous brands and types of loaves, and fancy wrappings. Conservation of truck transportation already had dictated reductions in the frequency of delivery service, the economies effected having gone to offset other increases in costs, but it has appeared that the rise in flour prices could be absorbed by additional economies in distribution. A Government order designed to force such economies has been issued.

These wartime economies may carry over, at least to some extent, after the termination of hostilities. There is reason to believe that

if consumers were billed separately for some of these extra services they would not care to support all of the latter which have been offered by the bread-baking industry. In practice, consumers have found it difficult to distinguish between quality and service as factors responsible for differences in the prices asked for the different kinds of bread. Consequently, competition has forced bakers to offer about the same kind of services as their competitors in the same locality. In many communities, however, services like stale bread returns have not been rendered, with no particular evidence of dissatisfaction. Once retailers and consumers become accustomed to the elimination of these distributive frills the trade may find it advantageous to continue some of these economies when the legal necessity for them is over after the war.

Similar price and margin considerations, together with the necessity for conservation in the use of delivery equipment, have brought economies in the delivery of fluid milk. In several places every-other-day delivery has been inaugurated, and there has been some reduction in the overlapping of delivery systems. Sometimes, however, these economies are more important in a physical sense than as savings in dollar costs to the firms practicing them. If drivers are paid on a commission basis the employer gains little from the reduction of delivery service. In this regard, the attitude of drivers' unions is reported to have been antagonistic toward an adjustment of salary and commision designed to translate the physical savings into actual savings for marketing agencies without actually reducing the drivers' pay.

This has brought into bold relief a labor problem which has been of growing importance in efforts to reduce marketing costs within recent years. "Feather-bedding" labor practices for which the transporation industry has so long been notorious are gradually creeping into the marketing system, and may eventually prove to be a major stumbling block in attempts to promote more efficient marketing. If these practices cannot be eliminated under the stress of wartime needs, what chances will there be to effect improvement in peacetime?

Marketing Produce in Southeastern States

The way in which wartime shortages of trucking equipment, gasoline and labor may give rise to permanent effects upon marketing processes is well illustrated in current problems encountered in the marketing of produce in the southeastern states, particularly

dairy and poultry products and winter vegetables. A considerable part of the production of vegetables in this area is scattered among many small growers whose individual output generally warrants only the most rudimentary arrangements for marketing. Itinerant truckers roam the countryside, stopping at farms to bargain with the operators for small lots of produce. The loaded trucks may then move directly north to terminal markets, or to southern assembly points where the load is bought by larger shippers or by the agents of large northern receivers for reshipment in either large refrigerated trucks or by rail.

Many of these southern shipping points do not have rail facilities and the volume handled is not sufficient in many cases to attract an adequate number of buyers, sometimes making it necessary for the itinerant truckers to go from point to point before finally disposing of their loads. The system in general places a considerable premium on the bargaining ability of the individual grower and of the itinerant trucker. It is possible, also, that this system of buying and selling fails to bring as even a distribution of produce in consuming markets as would prevail if marketing were better organized with more adequate opportunity for contacts between northern buyers and southern growers and dealers. Much dissatisfaction with this system of marketing has appeared to exist.

In any event, the shortage of tires and parts for trucks and wartime drains on the number of truckers point to a serious reduction in the number engaged in this business. State and federal agencies concerned with southern marketing conditions have given attention to the possibility of establishing market concentration centers, strategically located with reference to adequate volume and shipping facilities. Farmers would club together in order to transport produce to these points, where services facilitating sales to distant markets would be available. It has been proposed that the federal Government give assistance to these projects by offering official grading and market news services and by standing ready to buy produce at the concentration points until the market is firmly established.

Although these developments still are in the formative stage, it is evident that the deterioration of the old marketing facilities in this region due to war conditions may result in the development of new facilities which will remain as a permanent betterment when the war is over.

Incidentally, another impact of the war on marketing is evident

in connection with the foregoing problem, namely, the shortage of professional personnel. The project has been definitely delayed, and might even be held up altogether, by the lack of competent marketing analysts with sufficient time to work out the details of efficient size, location, etc., of the concentration centers and to make the other necessary arrangement. Lack of personnel for inspection and market news service also is a limiting factor.

Consumer Preferences, Grades and Standards

One of the most significant effects of the war on marketing is in connection with grading and standardization and consumer preferences.

The war has tremendously stimulated the use of standard grades and of official Government grading services. The purchases for military and lend-lease use are based largely on Government grades, furnishing a strong incentive for firms not formerly using Government grading services to do so in order to become eligible as Government suppliers. Similarly, the federal inspection of meat-packing establishments has been greatly expanded because the Government will not buy from uninspected plants. Dollars-and-cents prices for pork, beef and lamb are based on Government meat grades, thereby expanding the need for meat grading tremendously. It has been announced that similar requirements will be set up in connection with the establishment and enforcement of dollars-and-cents price ceilings for canned goods.

There seems little doubt that these developments will have many carry-over effects into the post-war years. Both dealers and consumers will become accustomed to Government grades, the trade will forget some of the old and out-moded grade designations to which they have clung so tenaciously for years, and the many advantages of standardization will become apparent.

It is unfortunate that more of the proposed improvements in federal grades and standards could not have been instituted before the grading program was so greatly expanded. Taken as a whole, neither our official nor unofficial grades and standards do much credit to 30 years of research in the marketing of farm products. Only weak efforts have been made to tie in grades with carefully ascertained consumer preferences.

How these developments in grading may eventually affect the marketing structure is indicated by what is reported to have hap-

pened in Canada, which has had grade labelling of canned goods since 1908. Previously the Canadian canning industry was similar to that of the United States at present, with large, medium-sized and small firms competing with a multiplicity of brands and consequent consumer confusion. Under grade labelling this was eventually replaced by price competition, and the canning industry in Canada is said to be more concentrated than it is here.

Another effect of the war in connection with quality standards is the tendency toward narrowing of quality ranges in pricing. This follows naturally from the shortages of many food items under ceiling prices, with consumers thankful to get almost any quality and willing to pay up to the ceiling price for the lower grades, thus narrowing or eliminating price differentials for quality. This tendency, of course, is partially offset by the official use of grades in connection with price ceilings, but the offset is not complete. Dollar rationing, if it were instituted, would have a tendency to narrow grade and price differentials, but point rationing would not necessarily do.

The difficulty which consumers find in obtaining foods of the kind and quality they are accustomed to use, together with the narrowing of quality price differentials, is causing people to become acquainted with products and qualities which they would never have used under normal conditions. There will inevitably be discoveries by consumers that some advertising claims are unjustified, and that the best people can live comfortably without confining their purchases to the top 10 percent of the quality range. The ultimate effects of this on consumer preferences and willingness to pay quality premiums are problematical. Some observers believe that after several years of forced abstinence consumers who have supported quality differentials in the past will go back to their old purchasing habits with renewed enthusiasm. Others maintain that after the war it will be much more difficult to maintain "quality" price differentials, especially those of an artificial nature. The question is analogous in some respects to that of whether or not automobile drivers will go back to high speeds after becoming accustomed to slow driving during the war.

This problem is of no little importance to cooperatives and other marketing organizations which have labored to build up quality reputations and price premiums for their products over a long period of years. In recent years there has been some tendency on

the part of "advanced social thinkers" to question some features of these quality programs which federal and state officials working with cooperative concerns have for many years labored to promote. There is some reason to believe that the war has accelerated the movement to give more consideration to the general public interest in connection with merchandizing programs applied to agricultural as well as industrial commodities.

Export Outlets

The war is having so many effects upon the international competition in the production and marketing of farm products that any adequate appraisal of the problem would require separate treatment. From the standpoint of a narrower interpretation of marketing, as opposed to such things as international wheat agreements and export subsidies, a number of potentially important post-war effects of the vast lend-lease operations are discernible. The agricultural export business of the United States in recent years has been confined largely to wheat, cotton, tobacco, and other staples. This has been largely because of the character of our production in relation to domestic demands, but also has reflected the fact that the kind of processed and specialty products we produced frequently were not those for which consumer preferences in European and other countries offered the best market.

Ignoring other economic elements which in the final analysis will be much more important in affecting the volume of our post-war exports, the wide-spread use of American foods in Great Britain and other countries during the war will offer post-war export opportunities for some food processors in the United States. In years of large supplies and relatively low domestic prices, for example, it is quite possible that dehydrated eggs, meats and other vegetables may be shipped abroad in considerable volume. Many firms are obtaining experience in preparing products for export shipment.

Marketing Costs and Margins

Although the war has stimulated factors ordinarily associated with increases in marketing margins, total costs of marketing a given quantity of food products rose only slightly in 1942, and by the end of the year were about at the 1935–39 pre-war level, only 7 percent above 1941, which was the lowest since the depression

year 1933. The full dollar increase in food costs to consumers since 1935–39 has been passed back to the farmer. Charges for marketing cotton products, however, have risen above the 1935–39 pre-war level in nearly normal relation to factors affecting margins; but

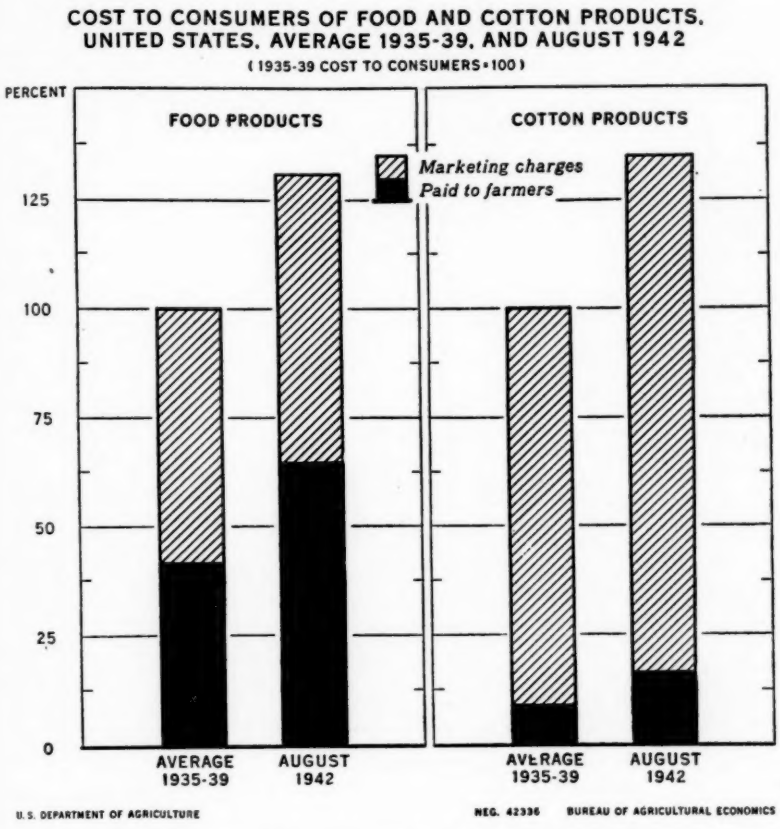

FIG. 3. COST TO CONSUMERS OF FOOD AND COTTON PRODUCTS, UNITED STATES, AVERAGE 1935–39, AND AUGUST 1942.

cotton farmers in late 1942 still were getting about 13 cents of the consumer's dollar compared with 12 cents in 1941 and the 1935–39 average of 9.3 cents (*see Figures 3 and 4*).

The current farm-retail price spread for food products is abnormally low in relation to the level of prices and of general wage rates, factors usually associated with changes in the over-all margin. This situation largely reflects the influence of price ceilings,

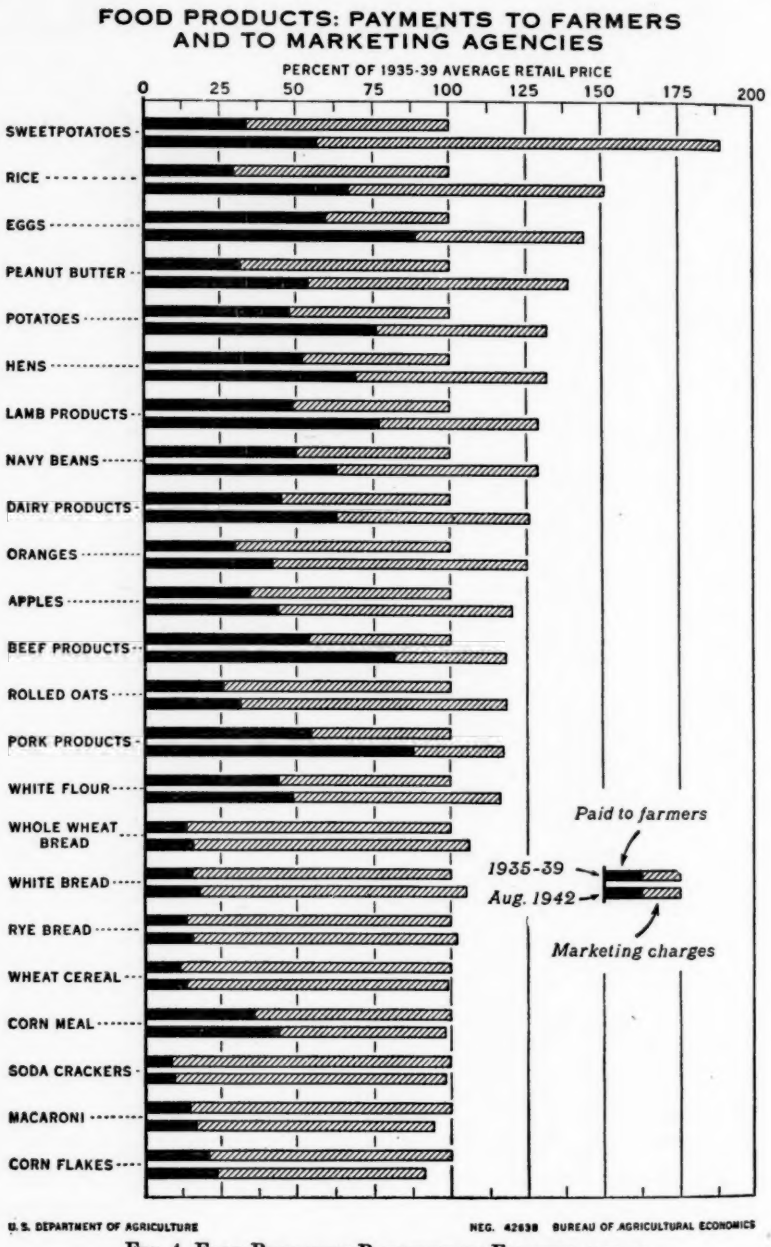

FIG. 4. FOOD PRODUCTS: PAYMENTS TO FARMERS AND TO MARKETING AGENCIES.

which have held down advances in retail prices this year and at the same time permitted farm prices for many commodities to rise sharply. The fact that marketing agencies have experienced an increased volume of business, and apparently have been able to effect a considerable increase in labor efficiency, has made it possible for the relatively low level of marketing charges to continue thus far. But there is little doubt that the margins of many agencies are being squeezed below the level which would permit long-continued operation, in view of advanced wage rates and other cost items. Some elements of the food industry will have to be given relief, either in the form of subsidies, increases in ceiling prices, or a decline in buying prices which would be reflected back to producers. Recent actions of the Office of Price Administration have permitted widening of certain processing and distributive margins by increasing maximum prices at retail.

The large volume of agricultural production in response to war needs promotes full utilization of facilities for local assembly, transportation, storage and processing; but diversion of large shares of these products to military and lend-lease uses eventually will decrease the share flowing to civilians through wholesale and retail agencies. The result will be a lower level of utilization of distributive capacity, which is already in excess of needs, and probably higher costs if all distributive firms are to be retained in business. After the war and the post-war rehabilitation, on the other hand, we may expect to find war-generated excess capacity in some of the lower levels of marketing, but much more complete utilization of domestic distributive facilities.

Wartime stringencies and simplification are promoting many efficiencies in marketing in the sense of a higher volume of goods marketed per unit of manpower and of materials used. Will these efficiencies continue after the war? The answer depends in considerable part upon the general employment situation during the post-war period. If industrial enterprises can continue to operate at near wartime levels of output and war-curtailed services are again expanded so as to absorb those demobilized from war pursuits, then the wartime efficiencies in marketing may continue. If, however, there is again a large surplus of manpower to perform many "unnecessary" services which lead to "inefficiency" in the sense noted above, the efficiency of marketing may be expected to decline and costs in terms of constant dollars to increase.

General Conclusions

Will the wartime developments in marketing which have been described in broad outline in this paper, taken as a whole, really bring important shifts in the post-war pattern of marketing processes and agencies, or will conditions return to something like their pre-war status? The answer to this question, like that to the similar one which arises in regard to agricultural production, will depend in no small measure upon economic conditions following the peace and the Government measures taken to affect those conditions. It now seems likely, however, that marketing methods and agencies will feel the effects of the war for a long time to come. In many respects these effects will be merely a hastening of tendencies already noticeable before we entered the war. The situation is somewhat analogous to that found in the field of plastics, where wartime needs have resulted in a much quicker development of the industry along lines which were part of a discernible trend in pre-war years.

One of the most important of these peace-time tendencies so greatly accelerated by the war concerns the relation of government to marketing. "Liberals" may term this trend "public assistance to marketing," while critics may call it "interference." Regardless, it seems generally recognized that the Government will find it difficult to pull out from many of these commitments after the war, even if it wants to.

Inadequacies of Marketing Research

Regardless of how the marketing system is affected by the war, it seems quite obvious that marketing research will be definitely influenced, and probably for the better. The war has uncovered many weaknesses in our program of agricultural economic research. We have been unable to give satisfactory answers to such important questions as how much a given increase in support prices can be expected to affect the output of specific farm products. Especially in the field of marketing have these deficiencies become evident. The whole program of price control has been handicapped by lack of suitable information regarding marketing costs and margins, even after thirty years of research on the question of Who gets the consumer's dollar? We found that we knew very little about the capacity of processing and storage facilities, as for example even such long-established facilities as packing plants and cold storage

warehouses. In connection with countless important war problems we have been compelled to start almost from scratch in obtaining information about conditions and in evaluating the probable effects of proposed actions.

Several reasons for this are apparent. In the first place, in marketing as contrasted with agricultural production we have had relatively few regularly kept up series of secondary data. Even such important data as wholesale prices of farm products have in only a few cases been tabulated and averaged so as to be usable in connection with such things as the establishment of price ceilings. The price analyst has had many sources of secondary data to call upon, particularly data relating to production and farm prices; the marketing analyst, on the other hand, has relatively few dependable series. After the war we should make a real effort to build up series of periodical marketing data, as opposed to our former too great reliance upon special surveys which soon become out of date and preclude satisfactory time series analysis.

Incidentally, war requirements have shown up the lack of adequacy and reliability of many of the secondary marketing data which are available. It has been found, for example, that relatively few wholesale price quotations are sufficiently specific and representative for anything except a day-to-day general picture of price trends. Quotations too frequently are given in terms of a wide range, and there are definite indications that the grades supposed to be represented vary from market to market according to differences in the reporters' judgment. Many of the wholesale quotations for various reasons are believed to be absolutely untrustworthy, representing price bases on which premiums and discounts are regularly allowed in connection with actual sales.

Much of our past marketing research has been too localized to be tied into problems of regional or Nation-wide scope. This localized research also has involved a tremendous amount of duplication, with various states issuing similar research bulletins dealing with such marketing phenomena as livestock shipping associations, although most of the problems encountered frequently are similar in each area and the results of a study in one state would serve for most purposes in other states.

Far too much of our marketing research also has been of the master's-thesis or term-paper type, with time and funds spread so thin and the pressure to give birth to frequent bulletins so strong as

to preclude any really penetrating and exhaustive analysis of a given marketing problem.

These lacks have been emphasized by a pronounced failure to follow scientific research methods by first definitely outlining a marketing problem and then proceeding to obtain the facts necessary for testing the hypotheses or conclusions arrived at on *a priori* grounds. Instead, we have tended to collect miscellaneous facts regarding some broad subject such as "The Marketing of Missouri Billy-Goats," with the result that many of the facts adduced were of little significance, quickly became out of date, and were rarely sufficiently complete to give conclusive answers to the really important problems in marketing.

These are only a few of the deficiencies in marketing research which have been thrown into bold relief by wartime needs in connection with marketing adjustments and controls. The author of this paper, in twenty years of marketing research, has contributed his full share to this all-too-long list of research mistakes.

It is to be hoped that after the war many of these deficiencies can be rectified, and marketing research placed on a much more useful plane. This can be done through greater coordination of effort, the utilization of modern scientific research techniques, and especially by directing our efforts to the solution of specific problems rather than to the mere gathering of miscellaneous facts (this does not refer to continuous series of secondary data) and description of marketing processes.

DISCUSSION BY CARL M. CLARK

University of Kentucky

An excellent panoramic view of the impacts of the War on our system of marketing farm products has been presented to us by Dr. Thomsen. One cannot help feeling somewhat awed at its scope and magnitude. The pressure and impacts, being so varied in character, temporary in nature, and fluid in development, leave one somewhat at a loss in attempting to evaluate their relative significance. Dr. Thomsen points out this difficulty. But, some assistance may be found in evaluating the impacts through examining them in the light of the long-time trends under way in market organization and operations, and the part that the Government has been playing in some of these trends.

Briefly summarizing Dr. Thomsen's discussion, the impacts of the present war arise largely out of the tremendous increases that occur in demand. As a result, the marketing system is heavily burdened by an abnormally

large flow of products; and market prices are unstabilized by the inflationary forces set in motion through rising shortages of goods and services. This, of course, would be true of any war. There are, however, a number of important differences in the character of the burdens arising out of the present war as compared to World War I. This, probably, is accounted for very largely by the trends and developments in the marketing of farm products set in motion by the impacts of World War I.

The developments in marketing farm products prior to World War I were largely through private enterprise, possessing considerable freedom of action with competition depended upon to protect the social interests. The Government, up to this time held a relatively insignificant place in the marketing of farm products. Undoubtedly, through this system, one of the most efficient marketing systems was created the world has ever known. But, the impacts of World War I, raising the social interests to levels heretofore unknown, served to call attention to a number of important weaknesses in the marketing of farm products. For example, the competitive method of determining price through commodity exchanges, to which Dr. Thomsen calls our attention, may have served to stimulate inflationary trends, thus adding to the problem of maintaining economic stability. Likewise, in a deflationary period, such as followed World War I, competitive determination of market price probably served to increase the severity of the declines in prices.

The great pressure from the demands of World War I made clearer a number of weaknesses in the distributive channels through which farm products flowed, particularly in regard to storage, transportation, standardization, and finance. Storage facilities proved to be inadequate to serve the war needs, not only from the standpoint of the amount of space available, but also in regard to the location and quality of service. The financing of market operations proved to have important weaknesses, especially in the way of inadequate centralization of control in the financial system to curtail and restrict the inflationary flow of credit and to cushion the deflationary impacts arising from the decline in war demands. Credit policies did much to encourage excessive flow of farm products through market channels and create unstable conditions in commodity exchanges, particularly following the War. Farm-to-local-market movements did not present such a serious problem in transportation as did the "long haul" flow of farm products by rail to the Atlantic Seaboard, which reached a crisis stage. World War I demands brought to the forefront, probably in a less dramatic manner, the lack of sufficient standardization in the marketing of farm products, particularly in central markets, in regard to grades and trade terms. In many instances, the Government acquired farm products of very poor quality even to the extent of being unfit for human consumption. Many competing market agencies, lacking in coordination and centralization, constituted another but less dramatic weakness in the capacity of the markets to serve large war orders—probably not so much in the case of wheat, cotton, and livestock as of other farm products.

In the post-war decade, much progress was made toward correcting the weaknesses brought to the forefront by the impacts of World War I. The

Government played an important part in these developments by following a general policy of encouraging and assisting private enterprise to make readjustments that would contribute to the capacity and stability of market operations. For example, a considerable amount of regulation was established over various commodity exchanges in an effort to improve their price-making abilities in the general direction of securing greater stability in the level of prices. Regulations and standards were provided by the Government for storing of farm products as a part of the effort to secure greater efficiency and stability in the flow of products through market channels. Considerable governmental support was given to the cooperative movement in marketing farm products, motivated, in part, by the hope that sufficient market control and capacity would be acquired through large commodity cooperatives to offer an important stabilizing influence over the flow of farm products into market channels. Market standards in respect to grades and trade terms were established to facilitate the pricing and storing of many farm products. Much progress was made in the post-war period in the way of revisions in credit policies and concentration of credit control for purposes of strengthening the capacity of the financial structure to serve the changing economic needs of the country. Legislation was passed to strengthen the Governmental regulation of transportation.

Since World War I, very rapid progress has been made in pioneering trade channels and extending the market organization for many farm products such as dairy products, poultry products, fruits, and vegetables toward a national scale; wheat, corn, cotton, and meats, long before, having reached a national scale in character. The depression of 1930 made clear that market organization and control was still inadequate to cope with the problems of surpluses and price instability, thus extending governmental assistance and control of market operations in other directions to include price minimums, surplus commodity purchases, subsidies, and marketing agreements.

All developments toward greater efficiency and organization in marketing farm products are returning incalculable social dividends toward the prosecuting of the present war. Without them, Dr. Thomsen would have had quite a different presentation to make of the impacts on the marketing of farm products. For example, the development of grade standards, along with a market grading organization and experienced personnel, are making a valuable contribution in facilitating the purchases of large war orders of farm products. The developments in storing of farm products, both in regard to capacity and quality, have very materially reduced the importance of storage as a problem in the conduct of the present war. The ability of our financial institutions to carry their share of the load in financing, both in production and marketing, is so great that so far they rarely are mentioned among the economic problems arising out of this war. The problems of rail transportation have not reached the magnitude of that of World War I, though the load now carried is far in excess. The farm-to-local-market transportation, which is largely based on the truck now, is a far greater problem in the present war than in World War I. However, this is

not due so much to the lack of trucking capacity to serve the increased demands, but, indirectly, to poor national planning in regard to certain strategic materials essential to the maintenance of local transportation. The surplus commodity purchasing program, developed to bring greater stability to farm prices, provided a nucleus in the form of an organization and trained personnel that has served to reduce greatly the Government's problem of purchasing tremendous quantities of farm products for military and lend-lease purposes. The increased centralization and coordination in market organization over the past two decades has further reduced the impacts of acquiring, storing, processing, and transporting tremendous Government purchases of farm products for war purposes.

Behind all of the above developments, the great body of data, knowledge, and trained personnel developed through research in market organization and prices over the past two decades has made an immeasurable contribution toward organizing and planning the prosecution of the war. This is not in contradiction to Dr. Thomsen's challenge of the adequacy of marketing research over the past twenty years in serving present war needs. Many inadequacies are bound to appear. But if the large body of knowledge in distribution economics developed since World War I were not available, the mistakes and losses in time and money would be much greater than they are in the present war. Regardless, of the great confusion that appears to exist in Washington, it is becoming more evident as time passes that the prosecution of the war has been reasonably well planned in the light of the knowledge at hand and past experiences. Much of the above improvements and developments in the marketing of farm products, at least indirectly, are the contribution of the impacts of World War I toward reducing the impacts of World War II.

What inefficiencies in marketing farm products will the impacts of World War II bring forth for post-war consideration? Dr. Thomsen has pointed out a number of the impacts likely to continue into post-war period. Briefly, the marketing problems gaining public consideration in post-World War II will, most likely, tend to center in the market channels near the consumer rather than near the farmer as occurred in post-World War I. Economic interests of both farmers and consumers will motivate such attention. A number of developments before and during the present war lead to this conclusion. The lack of adequate standardization in consumer goods processed from farm products is made more evident in the buying program to fill large Government war orders. The trained Government personnel has experienced no small amount of difficulty in evaluating the comparative merits of consumer goods processed by various formulas into an unlimited variety of containers. The attempts of the Government to effect greater standardization in processed farm products, as a means of facilitating the prosecution of the war, may result in some gains evident enough to generate a considerable movement in this direction during the post-war period.

Again, the necessity of curtailing marketing services to conserve strategic materials has brought into the open the excessive amount of marketing facilities, particularly in the trade channels serving consumers—over-

lapping of market areas and duplication of trucking services are good examples. The greater clarity of the existence of the excessive amount of some marketing facilities and services and the experience of getting along without so much service during war conditions might serve to focus public attention on the possible social gains to be had in this direction under peace-time conditions.

In recent years, the progress of chain stores is raising challenging questions regarding the efficiency of distribution in the consumer end of trade channels. The activities of various none-too-well organized efforts and by various government agencies have given emphasis to consumption problems. These developments may help to focus public attention in the post-war period on the consumers' place in distribution.

The developments and experiences to arise out of post-World War II may go far toward giving more organization to and establishing a greater understanding of the basic principles in the slowly developing field of consumption economics. As this body of knowledge expands in scope and clarity, the knowledge gained in the past two decades in food nutrition and health can then become a potent force in the formulation of national policies. The efforts to bring about greater equality in distribution—such as surplus commodity purchasing for relief purposes—in an economy of abundance may be more effectively accomplished. Present national policies pertaining to agricultural production and marketing may be gradually remolded in line with the increased knowledge in the field of consumption economics.

If the contribution of post-World War II should prove to be that of bringing consumption economics toward an equality with distribution and production economics, it will be a most fundamental contribution. Many problems will confront the social scientists in bringing the knowledge and principles of distribution economics arising largely out of post-World War I and production economics originating in earlier periods into harmony with the new body of thought. This development would be most important to the refocusing of public attention on marketing policies and marketing research which Dr. Thomsen predicts will occur in post-World War II. It will be an underlying force in shaping the point of view and objectives of marketing research.

The cessation of war demands, in all probability, will force the Goverment to remain in the market as a dominating buyer to give stability to the post-war readjustments. If this should occur, then the Government will find itself in a rather powerful position to facilitate many adjustments in market procedure and operation for purposes of greater efficiency in distribution. It is reasonable to believe that the expanding paternal role played by the Government in the marketing of farm products during post-World War I will continue into post-World War II.

WARTIME PROBLEMS OF CONSERVATION OF TRANSPORTATION

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THE factors which differentiate the problem of conservation in the use of transportation facilities and resources in a time of war from that which prevails in peace times are the urgency of the need; the enhanced prospects of effecting economies; the simplification of the criteria used to determine whether or not a transportation function needs to be continued; and the necessity of conserving certain strategic materials which are critical for the war purposes and whose use is therefore restricted or prohibited. In war time, moreover, rationing and price ceilings deprive the economist of the criteria of relative prices as a measure of relative scarcity; other criteria must therefore often be invoked. Having recognized these exceptions, however, we may say that the wartime problem of conserving transportation facilities is not greatly different from that of peactime either with respect to the opportunities for economizing, the principles and procedures to be applied in effecting them, or the subsequent problems of social control which are entailed.

After some prefatory remarks I will attempt in this paper: to outline briefly the principles and procedures which may be applied to this problem wherever it may exist; to provide some detailed illustrations of the application of these principles with specific reference to the problem of effecting economies in the transportation of milk and dairy products; to summarize briefly some of the research work which has been applied to this problem in other markets and with respect to other commodities; and to set forth as clearly as possible the resulting problems of social or public control which are an inherent part of this problem and which, I might add, we have grossly neglected thus far.

I. Wartime Exigencies

Before discussing these topics, it is necessary to elaborate somewhat upon the differences between the wartime and peacetime aspects of the transportation problem. War obviously imposes a tremendous strain upon the whole transportation system. The indexes of ton-miles of freight carried by ships, railroads and trucks, and of passenger-miles of traffic carried in passenger conveyances

are too conspicuous to require comment. These tremendous increases in requirements have occurred simultaneously with a drastic decrease in the production of railroad equipment, trucks and automobiles; hence the utmost conservation must be effected in the use of all kinds of transportation facilities. Except in a very restricted sense, moreover, there is no such thing as a "non-competing use" among these transportation facilities because increased demands which may be placed upon one sector of the transportation system or changes in the resources required to render the service are reflected quickly throughout the entire system. Unless every effort is made to conserve in the use of these resources, the stringency of the problem is such that it may well cause either serious disruptions in our entire domestic economy or a disastrous curtailment of our war effort.

In view of these obvious facts, I am impelled, much as I dislike to add one more voice to the clamor of criticism, to digress for a few moments and make a few comments regarding the manner in which the motor transportation and delivery of milk has been handled by the Office of Defense Transportation. Duplication in the delivery of milk both from plants to consumers and from farms to city plants has been emphasized so much that the public is generally aware of the possibilities of economy in these particular functions. The same problems exist, however, in deliveries by department stores and grocery stores, in the delivery of gasoline, and in fact, in the delivery of considerable other merchandise, much of which is far less essential from the standpoint of public health and convenience than the delivery of milk. It is probable therefore that the problem is no more acute and that the possibilities of economy are no greater with respect to this commodity than most others.

It should not be denied that there are enormous possibilities of effecting economies in the delivery of milk. These possibilities will be discussed in considerable detail later in this paper. At this point, however, I want to state that the possibilities of effecting economies in the transportation of this commodity, the procedures which should be applied in effecting these economies, the administrative machinery required to put these plans into effect, and the authority, penalties and sanctions through which compliance by the industry could be obtained, were all presented clearly and fully to the Office of Defense Transportation as early as March, 1942. Programs were presented to O.D.T. which would have reduced by 80 to 90 percent

the number of miles of truck transportation required to maintain the delivery of milk from city plants to consumers. Similar programs were presented which would have reduced the mileages required in bringing milk from farms to city plants by 30 to 40 percent. These programs would also have reduced the amount of labor required in both of these functions by amounts ranging from 30 to 50 percent, depending upon circumstances. Few, if any, of these plans or programs have as yet been utilized in any significant degree by the Office of Defense Transportation. In fact, they have scarcely been acknowledged. In the meantime local agencies in Maine, New Hamspshire, Massachusetts, Connecticut and Wisconsin have attempted to determine from officials of the Office of Defense Transportation how local agencies might best cooperate with them and how authority might be applied in order to put some of these programs into effect. So far as I know now, the Office of Defense Transportation has shown little interest in these programs and still less desire to cooperate with local agencies in putting them into effect. In fact, the attitude of the Office of Defense Transportation appears to be (in so far as a judgment of their attitude can be ascertained by the writer) that if local agencies will work out the plans, set up the committees to work out the detailed program for a market or for a commodity, establish the administrative machinery needed to put the plans into effect (and finance it), secure 100 percent cooperation or compliance by the industry, and put the program into effect without assistance from federal authorities, the Office of Defense Transportation will approve such programs—or will at least refrain from encouraging the Department of Justice to prosecute participants for violations of the anti-trust acts. In the face of one of the most critical problems in our whole war economy and with perhaps the greatest grant of authority ever given to any agency in this country, this negative attitude appears to be ill-adapted to meet the situation.

Returning from the digression, the essence of economizing (i.e., conserving) consists of an intensive use of the most scarce resources or facilities. In peace times (and in the absence of arbitrary pricing) relative scarcities are indicated and measured by the relative prices prevailing for the resources, and changes in the relative scarcities are reflected in changes in the relative prices. These relative prices, in turn, indicate which factors should be utilized most intensively. As between two methods of producing the product or rendering

the service, moreover, that method which costs the least will be chosen.

In war time, however, certain resources are so urgently needed that, in relation to the available supply, the demand for them would drive prices to exorbitant heights, thereby prohibiting the employment of these resources in all but those uses for which the high prices can be paid. Recognizing that the distribution of incomes, especially as between the civilian population and the government as a purchaser of wartime necessities, is such that high prices for these scarce factors would prohibit their use in certain functions which are deemed essential even though high prices cannot be paid for them in these uses—recognizing this, the principle of rationing (coupled with price ceilings) is applied. This deprives the economist of the criteria of relative prices in his analysis of the problem. In the transportation field, the scarcity of rubber tires provides an excellent illustration of the complications which these conditions superimpose upon the already difficult problem of analyzing the possibilities of conservation in the use of transportation facilities. If the prices for tires had been permitted to rise in response to the relation between supply and demand, they would now be at record heights. The fact that their prices have not been permitted to rise must not blind us to the need for conserving them. The same principle applies, although to a lesser degree, to trucks, repair parts and gasoline. As between two systems of transportation, therefore, one of which conserves greatly in the use of these strategic materials, and another system in which the per unit cost of transportation is less but in which these strategic resources are conserved to a lesser degree, we must choose the former. The problem of analysis is complicated greatly in all border-line cases. Fortunately, however, there are so many possibilities of conservation without sacrificing essential services that great changes may be effected without raising many of these intricate problems of evaluation.

In the same way, individual ends, desires and pleasures must give way to the larger general and public purpose of winning the war. Driving merely for pleasure, for example, has been drastically reduced if not eliminated. Retail deliveries of all kinds have been greatly restricted. These decisions have been made simply on the basis that these purposes are so clearly subordinate to the larger purpose of winning the war that whenever they interfere with it they must be prohibited. As war needs become more intense, we

may expect this larger purpose to intrude more and more inexorably upon individual civilian peacetime convenience.

In war time, further, we must make full use of already existing facilities. We cannot substitute new methods or new systems for the old unless these new systems also make use of existing facilities. The old New England adage, "Use it up, wear it out, make it do, do without," is of particular applicability. In our analysis of the transportation problem, for example, we have come to the conclusion that large trucks are generally more economical than small ones. When new trucks are not available, however, this principle can be applied only to the extent of utilizing the large trucks which are already available ; the remainder of the required service must be supplied by smaller ones, even though each ton-mile of transportation service rendered by them costs more. The same principle applies to the utilization of terminal and collection facilities, country receiving stations and other "fixed" costs which are adjuncts to the transportation system.

II. Principles

In contrast to these rather lengthy prefatory remarks, the principles which appear to be of most importance and most general applicability to the problem of conservation in the use of transportation facilities can be stated both briefly and succinctly; they are as follows:

1. Attainment of the maximum density (i.e., tons or units) per mile of necessary hauling. This can be done in one or more of three ways:
   a. Allocation of exclusive territories for individual markets, plants and transportation routes;
   b. Lengthening the time interval between hauls, so that larger load can be hauled on each trip;
   c. Combining on the same vehicle or on the same trip the hauling of commodities which previously had been hauled separately.
2. Using large conveyances, loading these to capacity and utilizing them as many hours per day as possible;
3. Organizing transportation in such a way that commodities are also hauled on the return trip.

III. Illustrations

A. *Conservation of Transportation Facilities in Retail Milk Deliveries*

Rigorous application of these principles would result in truly amazing economies, both in the mileages and in the amounts of labor required in the transportation of commodities and especially

in retail deliveries. In a report submitted by the Connecticut Dairy Conservation Committee[1] to the Connecticut State Defense Council, for example, it was estimated[2] that, prior to the adoption of the system of delivering milk on alternate days only, milk dealers traveled approximately 6000 miles per day in delivering milk to customers within the City of Hartford; through the adoption of the every-other-day delivery system these mileages were reduced to about 3,500 miles per day. By allotting an exclusive territory to each dealer in the area immediately adjacent to his plant,[3] and by loading the delivery trucks to reasonably full capacity, the daily mileage required to deliver milk to each of the customers previously receiving it could have been reduced to 591 miles per day if milk was delivered to these customers daily and to 335 miles per day if it was delivered only on alternate days. It was estimated that the amount of labor required in delivering milk could have been reduced by 35 to 50 percent, depending upon conditions prevailing on the individual routes and upon the size of load carried on the delivery truck. The reduction in the wear on trucks and tires would also be substantial, and the reduction in the use of gasoline and oil obviously would be almost directly proportional to the reduction in daily mileages.

These reductions are extraordinarily large. Upon superficial examination they appear almost unbelievable. Brief analysis, how-

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[1] The Connecticut Dairy Conservation Committee was appointed by the Connecticut State Defense Council on February 17, 1942 in response to requests from a large number of organizations and individuals. The Committee consisted of representatives from associations of milk producers, milk dealers, labor and certain public agencies, such as the Milk Administration and the University of Connecticut. The purpose of the Committee was to study the emergency in the transportation and delivery of milk and to make recommendations to the State Defense Council for meeting these problems. In fulfilling its purpose the Committee submitted the above-mentioned report.

[2] These estimates are based upon a study of the retail milk delivery system for the Hartford market, conducted by R. G. Bressler, Jr. and S. K. Seaver, of the Department of Agricultural Economics at the University of Connecticut. The results of this study have not yet been published. They were made available to the Connecticut Dairy Conservation Committee and to the writer through the courtesy of the Storrs Agricultural Experiment Station.

[3] For a detailed description of the principles followed in the allocation of these exclusive territories, see Allocation of Milk Supplies Among Contiguous Markets, JOURNAL OF FARM ECONOMICS, Vol. XXII, No. 1, February, 1940, by D. O. Hammerberg, and the references noted in this article. See also Storrs Agricultural Experiment Station Bulletin 237, Efficiency of Milk Marketing in Connecticut: 1. Supply and Price Interrelationships for Fluid Milk Markets by D. O. Hammerberg, L. W. Parker, and R. G. Bressler, Jr., Department of Agricultural Economics, University of Connecticut, February, 1942, for mathematical demonstration that revised areas will minimize transportation requirements.

ever, will indicate that they are not only feasible but inevitable if the above-mentioned principles are applied rigorously, for the amount of duplication in milk deliveries is very great. The area included within the survey contains about 187 miles of city streets. It is served by about 144 individual milk dealers and by several hundred separate milk routes. The daily mileages, both under the every-day and under the alternate-day delivery systems were ascertained by a careful estimate of the total mileage (about 6,000 miles) traveled by the trucks serving this market. Since 6,000 miles were traveled daily in this area and since it includes only 187 miles of street, it is apparent that, on the average, each mile of city street was covered about 27 times each day; under the every-other-day delivery system, this figure was reduced to 18 or 19 times. On the average about 300 quarts per day are purchased by consumers on each mile of city street in this area. If an optimum retail delivery load is assumed to be 450 quarts per day, only about 1½ miles of travel would be entailed in the actual delivery of each load. Since the area is only about four miles wide and six miles long and since distributing plants are scattered throughout the area, the distance traveled from the plant to the delivery route ordinarily could not exceed 1½ miles even for the routes located at the greatest distance from the plants; the average would be less than one mile. Under an exclusive territory system, most of the routes would be located immediately adjacent to the plant and little "dead haul" travel would be entailed. Under this system, therefore, the average length of route, including both the travel from the plant to the point at which deliveries would be started and the distance covered by the delivery route itself, would be less than three miles per day. This figure should be contrasted with the figure of 27 miles per day, which is about the average daily mileage under the prevailing every-other-day delivery system, and with the figure of about 35 miles per day which was the average length of route under the milk delivery system which prevailed up to January 1, 1942.

The estimates of the reduction in the amount of labor required varied from 35 to 50 percent. The milk dealer members of the Connecticut Dairy Conservation Committee were inclined to place the estimate at the larger rather than at the smaller of these percentages. Unless changes were made in the basis of paying delivery men, the reduction in dollar costs would not be proportionately so great as the reduction in man-hours because retail delivery men

usually are paid on the basis of a percentage of the delivered retail price rather than on an hourly basis. In a time of acute labor shortage, however, the saving in man-hours is important even though it is not reflected in a corresponding reduction in the retail price paid by consumers.

The Hartford milk market is exceptional in some respects; it was somewhat surprising to find that similar economies could be effected in other markets. In the Hartford area the number of milk dealers is exceptionally large in relation to the volume of milk distributed; this is due to the large number of small merchant-dealers and producer-dealers each of whom distributes a relatively small quantity of milk. In a recent study of the New Haven market[4] which included more of the surrounding territory, it was found that the possibilities of economizing in the use of transportation resources and labor were about as great as in Hartford. In contrast to the Hartford market, the area in and around New Haven was served by 54 dealers as compared to 144 for the Hartford market; the number of miles of city streets in the entire area was 750 as compared to 185; and the daily mileage traveled by these dealers was 17,100 miles as compared to 6,000 miles for the Hartford market. In New Haven each street was covered about 23 times on the average as compared to 32 for the Hartford market. It was found that on a daily delivery basis, daily mileages could be reduced from 9,000 to 1,550 miles; while on an alternate-day delivery system, they could be reduced from 5,000 to 1,050 miles per day.

Since there were fewer dealers in the New Haven market, there naturally was less duplication; had there been only one dealer there would undoubtedly have been little or none. When allowances are made for the difference in the number of dealers serving the market, the duplication in the delivery service was as extensive in the New Haven as it was in the Hartford market. It appears, in other words, that the amount of duplication in mileages in any particular market is largely a function of the number of dealers operating in that market. With a drastic reduction in the number of dealers involved, a certain amount of deliberate rationalization may also take place. This could, of course, occur through volun-

[4] This study was conducted by R. G. Bressler, Jr. and D. A. Clarke, Jr. of the University of Connecticut. The results have not yet been published but will be available in the near future.

tary action without a reduction in the number of dealers, but the chronic suspicions and antagonisms between individual dealers and between different groups of dealers apparently thwart such mutually advantageous adjustments.

Great possibilities of economizing are also present in the smaller and more rural milk markets. Research workers at the University of Connecticut are completing studies of the milk delivery systems[5] in a number of rural areas. Fourteen rural towns in which commercial milk distribution varied from 10 to 1,200 quarts daily were studied. These towns are served almost exclusively by producer-dealers. In view of the fact that these producer-dealers live on farms which are usually located at some distance from the markets supplied by them, it would seem that the amount of "dead haul" would be proportionately greater and that the opportunities for economizing in transportation through the elimination of duplication in delivery services would be less great. This study indicates, however, that even in these communities, the application of these principles would result in enormous decreases in daily mileages. At the present time 85 dealers are delivering approximately 7,393 quarts of milk daily to customers in these towns. Many customers served by these dealers receive deliveries only on alternate days. Even on this "mixed" basis, dealers travel approximately 640 miles per day. (On a daily delivery basis, daily mileages would be about 1,000.) If exclusive territories were allotted and if every-other-day distribution were made universal, the daily travel could be reduced to 320 miles per day. In rural towns with extremely small commercial distribution, the allocation of exclusive territories would not result in significant reductions in route mileage. In such cases greater density (i.e., a larger number of quarts delivered per mile of travel) can be attained most effectively by reducing the frequency of deliveries—to every-other-day, for example. Whenever the volume of commercial distribution, the density of consumption and the number of distributors in an area increases, the potential saving from granting exclusive territories tends to increase.

A statistical summary of the preliminary results of several of these studies is set forth in the following table:

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[5] These studies have been conducted by Alan MacLeod, Secretary of the New England Research Council. The results have not been published yet, but they too will be available in the near future.

PRELIMINARY SUMMARY OF RESULTS OF MILK DELIVERY STUDIES, CONNECTICUT, 1942

Market	Population	Number of Dealers	Daily Quarts Delivered	Miles of[a] Street in Area	Present Organization		Exclusive Territories	
					Every-day Mileage	Alternate-day Mileage	Every-day Mileage	Alternate-day Mileage
Hartford[b]	166,267	144	52,000	185	6,000	3,500	491	335
New Haven[c]	232,690	54	73,000	750	9,000	5,000	1,550	1,050
Torrington	26,988	36	11,700	128	1,384	853	345	245
Saybrook[d]	6,867	21	2,270	92	241	137	108	56
Mansfield	4,559	12	580[e]	59	115	58	84	42
Willington	1,233	5	113	51	24	12	23	12

[a] In rural areas, this is the mileage of paved roads, and not all of the roads are covered by delivery routes.

[b] Does not include suburban areas. In determining exclusive territories the city was allocated to dealers within the city limits, since their total volume was practically equal to the volume delivered by all operators. If the entire market including suburbs had been included, the percent reduction as a result of exclusive territories would probably have been somewhat lower as a result of the sparsely populated territories. The indicated mileage with reorganization is a true indication of the mileage that would be necessary within the city limits.

[c] Includes New Haven, North Haven, East Haven, West Haven, Hamden, Orange, and Woodbridge.

[d] Includes Chester and Essex.

[e] Exclusive of wholesale deliveries to State institutions.

All of these studies have been based upon the assumption that individual dealers would continue to deliver milk to about the same number of customers and would deliver the same amount of milk which they are now distributing. In the case of the larger markets, it was assumed that a deliveryman would carry an optimum load, i.e., about 450 quarts (or rather "points") per delivery truck on the alternate-day basis. The amount of labor involved, the time required per quart in doorstep delivery, the speed of the truck and all such related factors were based upon the present standards of performance by the average delivery men under the prevailing systems of distribution. Hence, no arbitrary assumptions or unusual elements of efficiency are involved in these estimates.

B. *Conservation in the Transportation of Milk from Farms to Milk Plants*

Studies of the transportation of milk from the farm to city plants or from farms to country receiving stations[6] also indicate enormous

[6] For the convenience of persons who may be interested in more detailed perusal of other publications dealing with this subject, the author suggests the following references in addition to those listed above; no attempt has been made to compile a complete list; the author has included only those which he has found particularly useful or which have immediate relevance to the problem of conservation in the transportation and delivery of milk:

Louis F. Herrmann, Paul E. Quintus, and William C. Welden: Cooperative Reorganization of Milk and Cream Hauling, Miscellaneous Report No. 53, Cooperative Research and Service Division, Farm Credit Administration, United States Department of Agriculture, Washington, D. C., May, 1942.

R. G. Bressler, Jr.: Economies of Scale in the Operation of Country Milk Plants with Special Reference to New England, The New England Research Council on Marketing and Food Supply, Boston, Massachusetts, June, 1942.

J. A. Hitchcock: Reducing Truck Mileage in Retail Milk Delivery, Bulletin 491, Vermont Agricultural Experiment Station, Burlington, Vermont, June, 1942.

H. B. Ellenberger: Bottled Milk Deliveries, Bulletin 486, Vermont Agricultural Experiment Station, Burlington, Vermont, April, 1942.

R. W. Bartlett: Adjusting Milk Distribution to Meet a Tire Shortage, *Illinois Farm Economics*, Number 85, June, 1942.

R. W. Bartlett and R. J. Mutti: Conserving Trucks and Tires and Reducing Hauling Costs of Country Milk Routes, *Illinois Farm Economics*, Number 83, April, 1942.

Alan MacLeod: Transportation of New Hampshire Milk: II. Reorganization of Truck Routes, Bulletin 325, New Hampshire Agricultural Experiment Station, Durham, New Hampshire, June, 1940.

Alfred A. Brown and J. Elizabeth Donley: Milk Cartage in the Southwick-Agawam Area of the Springfield Milkshed, Bulletin 363, Massachusetts Agricultural Experiment Station, Amherst, Massachusetts, May, 1939.

Alan MacLeod and Mary L. Geraghty: The Transportation of New Hampshire Milk: I. Analysis of Trucking Charges, Bulletin 307, University of New Hampshire Agricultural Experiment Station, Durham, New Hampshire, June, 1938.

Paul E. Quintus and Frank Robotka: Butterfat Procurement by Creameries in Butler County, Iowa, Research Bulletin 265, Agricultural Experiment Station, Iowa State College, Ames, Iowa, December, 1939.

possibilities of economizing in the use of transportation facilities. The extent of these economies differs somewhat in the various markets depending upon the systems of transportation employed and upon the degree to which the need for economizing has been emphasized by producer organizations and by external agencies, such as Experiment Stations and Extension Services. In New England the possibilities of effecting economies in the country transportation of milk have been given a great deal of emphasis. The results of these studies have often been utilized by producers' cooperative organizations, milk dealers and by the truckers themselves in reorganizing their individual milk transportation systems. Their efforts have been hampered greatly and restricted in their over-all effectiveness because this is a marketwide problem which must be solved by concerted action rather than by an individual trucker. An emergency such as the present, however, provides an opportunity for, if indeed it does not necessitate, an application of these principles.

Time and space will not permit a summary of the salient features of all these research studies. However some of them have been made since the advent of war and are specifically adapted to our present transportation problem.[7] Indeed a few of them have been made for this specific purpose and have been based upon the as-

L. T. Sonley: Cost of Transporting Milk and Cream to Boston, Bulletin 462, Vermont Agricultural Experiment Station, Burlington, Vermont, July, 1940.

R. W. Bartlett and W. F. Caskey: Milk Transportation Problems in the St. Louis Milkshed, Bulletin 430, University of Illinois Agricultural Experiment Station, Urbana, Illinois, March, 1937.

W. P. Mortenson: An Economic Study of the Milwaukee Milk Market, Research Bulletin 113, Agricultural Experiment Station, University of Wisconsin, Madison, Wisconsin, January, 1932.

George F. Dow: An Economic Study of the Collection of Milk and Cream in Maine, Bulletin 373, Maine Agricultural Experiment Station, Orono, Maine, August, 1934.

George F. Dow: Costs and Returns in Operating Milk and Cream Collection Routes in Maine, Bulletin 374, Maine Agricultural Experiment Station, Orono, Maine, September, 1934.

John J. Scanlan: Transportation of Milk in the Philadelphia Milkshed, Bulletin 13, Farm Credit Administration, Cooperative Division, Washington, D. C., April, 1937.

Leland Spencer: An Economic Study of the Collection of Milk at Country Plants in New York, Bulletin 486, Cornell University Agricultural Experiment Station, Ithaca, New York, June, 1929.

[7] For an excellent statement of the problem, a summary of the research procedures, a list of conservation possibilities, a concise list of the procedures to be applied, and an excellent list of references, see the handbook, Truck Transportation Between Farm and Market, by Alan MacLeod, compiled by the Bureau of Agricultural Economics, under the heading of War Service Research in Transportation Facilities and Supplies.

sumption that existing facilities and resources must be utilized completely. In a study of country hauling in northern Vermont, for example, Dr. MacLeod has indicated[8] that if existing truck routes were reorganized, and if only the larger trucks now in use were used to reasonable capacity (i.e., carried a full normal load and were employed a reasonable number of hours per day), these trucks could haul all of the milk which is now being transported on truck routes to country plants in the area by traveling only 1,755 miles per day. This is 1,153 miles per day less than these trucks travel at present carrying only a part of the milk and does not include the additional savings that could be made if the milk hauled by "self-haulers" were transferred to commercial truck routes. The use of 39 trucks out of a total of 101 could be discontinued entirely. In this study it was assumed that farmers would continue to sell their milk to the same dealers to whom they are now selling and that, although one trucker would do all of the hauling, he would deliver this milk to the plants of the dealers to whom the farmers on his route had previously been selling their milk. Somewhat similar opportunities were found in a study of the Providence, Rhode Island market.[9]

From the standpoint of practicability and particularly from the standpoint of the need for working out a program which would involve a minimum modification of producer and dealer relationships, this study is one of the most relevant researches which has been undertaken. It would seem that adjustments of the type recommended in this study are the least which we should expect in the war emergency.

C. *Conservation in the Transportation of Other Commodities*

Lest my emphasis upon the transportation of milk and upon milk deliveries create the impression that the possibilities of economizing in transportation are confined to this sector of the agricultural economy, I want to summarize briefly some of the studies which have been made of other commodities in other areas and to

[8] Alan MacLeod, W. E. Carpenter, and J. A. Hitchcock: Possible Savings in the Assembly of Milk: A Study of Country Hauling in Northern Vermont, Bureau of Agricultural Economics in cooperation with the New England Research Council on Marketing and Food Supply and the Vermont Agricultural Experiment Station, November, 1942.

[9] Alan MacLeod, J. L. Tennant, W. J. Corr, Jr.: Trucking Milk to Providence, Rhode Island, mimeographed report of New England Research Council and the Rhode Island Agricultural Experiment Station, March, 1942.

mention certain programs which have been developed for totally different and unrelated sectors of the marketing system.

In a study of the transportation of eggs to Connecticut cooperative associations,[10] Bressler and Hansen found that the weekly mileages traveled by egg truckers and by producers who delivered their own eggs to their association plant could be reduced from 15,710 to 2,740 miles and, at certain seasons, to 2,470 miles. This represents a mileage reduction of 80 percent. Since much of the distance traveled under the present organization is by small vehicles, the savings in gasoline and rubber would be somewhat less than the reduction in mileage but would still be substantial (i.e., about 70 percent). It was estimated that, "In a year such reorganization would save some 40,000 gallons of gasoline and roughly 100 truck tires. Labor, time of truck operators and of producers would be conserved and made available for other productive uses."[11]

In studies of the transportation of cream to Iowa creameries,[12] it was found that 21 creameries operated 73 routes in one county; on these the mileage traveled equalled 2,400 miles, i.e., about three times the total miles of road in the county. In one township nine creameries operated 17 routes on which the mileage was 210 (three times the road mileage in the township); in one extreme case, eight trucks traveled over a single mile of road. It is probable that two-thirds of this duplication could be eliminated through rationalization of trucking arrangements.

A study of farm delivery of petroleum products[13] by Maakestad and Robotka indicated substantial possibilities of conservation in that function. Some of the most important adjustments through which such economies could be effected were: servicing of farms by the stations nearest to them; less frequent delivery (elimination of "special" deliveries, for example); reducing the number of service agencies (in two extreme districts in Montgomery County, there were nearly twice as many salesmen as there were farmers receiving

[10] W. S. Hansen and R. G. Bressler, Jr.: Efficiency of the Transportation of Eggs to Connecticut Cooperative Associations, Department of Agricultural Economics, The University of Connecticut, Storrs, Connecticut. This bulletin is now at the printers. It will be available within a short time.

[11] *Ibid.*

[12] Frank Robotka and Gordon C. Laughlin: Cooperative Organization of Iowa Farmer's Creameries, 1937; Park E. Quintus and Frank Robotka: Butterfat Procurement by Creameries in Butler County, Iowa, 1939.

[13] W. T. Maakestad and Frank Robotka: Transportation Conservation in Iowa Farm Delivery of Petroleum Products, Transportation Memo. No. 7, Preliminary Release, Iowa State College, Ames, Iowa, November 2, 1942.

tank truck service); planning of delivery itineraries; and changes in the methods used in delivery and in filling farmer's tanks.

No estimate is given of the extent of the possible economies but the number of variables affecting the economy of delivery and the wide range in the indices used as criteria of performance suggest that the possibilities for conservation are very great. The authors also suggest several means through which economies could be effected. These include: the establishment of definite and uniform quality standards and grades for petroleum products (so that farmers could make more rational choices); differentiation between costs of service and price of product (so that buyers could choose the least costly service); increasing price competition; cooperative purchasing; and the substitution of group for individual decisions (in order that the whole process of servicing farmers might be planned to better advantage). The authors also suggest several proposals for emergency action.

The large number of gasoline filling stations, grocery stores, meat markets and, in fact, of all types of marketing agencies indicates clearly that there must be a great deal of duplication in the use of transportation facilities both in servicing these agencies and in their subsequent deliveries to individual customers. This waste of resources is in addition to those which are dissipated within the agencies themselves.

At the present time we are primarily concerned with the economic aspects of this problem. This is proper in a time of war. It is apparent, on the other hand, that we must also direct our thinking toward the larger problems of social and economic organization and the lack of conscious public purpose which make possible this widespread waste of energy and dissipation of resources even in a time of war.

IV. Problems of Public Direction and Participation

A realistic appraisal of the transportation problem indicates clearly that the nature of the function and the conditions under which it is performed are such that it is impossible to maintain real competition (in the sense in which the economist uses the term) and to have the function performed efficiently. An appreciable number of transporters operating in the same territory inevitably results in overlapping of routes and duplication of services. This is true both of farm-to-market transportation and of city deliveries. A reduction

in the number of operators, on the other hand, results in a monopolistically competitive situation in which the charges for the service tend strongly to be maintained at the monopolistic level and in which the unnecessary duplication tends to be proportional to the number of operators. A reduction in the number of operators to only one, of course, results in pure monopoly. There is a serious question, however, whether a condition of pure and unregulated monopoly might not often be preferable to the monopolistically competitive conditions which now characterize much of our transportation system. Under monopoly conditions prices for the service probably would not exceed and might even be lower in some cases than they are now, and much present duplication and inefficiency would be eliminated.

The promotion of competition in many marketing functions, especially in the field of transportation is likely to result only in further duplication of services and consequently in lowered efficiency for the market as a whole. It would also have the effect of postponing the time when alternative public action would be taken to eliminate the waste and to reduce exploitative charges.

Economic theory has made important contributions toward an understanding of many of the important economic relationships involved in these problems. The theories of monopolistic competition especially have indicated clearly the nature, prevalence and importance of monopolistic influences. Unfortunately economic theory, or perhaps I should say the way it has been taught, has had other effects which are less desirable. Instead of using the theory of competition as a conceptual device which is highly useful in a disciplined analysis of certain aspects of economic behavior, these concepts often have been so presented that they have become, not merely analytical devices, but a complete social philosophy. This has retarded the integration of economics with the other social sciences. It has also militated against the development of the kind of over-all thinking which is necessary to the solution of present day problems.

Economists have been remiss in this respect for they have not even carried their analysis to the point of suggesting the institutional adjustments required to cope with the economic problems (e.g., monopoly) which lie clearly within their domain. The inadequacy of the solution which they have suggested thus far (i.e., governmental regulation or operation) is apparent when we realize

that governmental authority and control can also be used to maintain monopolistic prices and inefficiency and for even more unconscionable ends (witness Germany). The negligence of economists with respect to these integral aspects of their problem has resulted in serious inadequacies, and occasionally in tragic misconceptions, by others who have had to cope with them because economists would not. The definitions and conceptions of monopoly which apparently are still entertained by courts, most lawyers and many laymen are excellent illustrations; the concept that certain services and commodities are "affected with a public interest" while others are not, is another.

Economists must realize that economic, social and political aspects are but different facets of the same phenomenon which, for the sake of convenience, specialized social scientists are permitted to observe from different perspectives. These perspectives must not blind us to the living realities underlying our abstractions, nor to the need for integrating our respective sciences so that they will be more useful in improving our culture. Above all, the separate phases of our analyses must fit neatly into the structure of our scientific framework so that the whole may be an enduring and commodious abode for a democratic philosophy based upon a fundamental faith in the dignity, decency and worth of the common man.

DISCUSSION BY CLIFFORD M. HARDIN

University of Wisconsin

Mr. Hammerberg has presented a clear and concise description of what is involved in a program for conserving transportation facilities during a period of war. He has drawn heavily upon research studies made in Connecticut and elsewhere for his background and factual information and has described numerous situations, particularly in the dairy industry, in which large economies in the use of rubber tires and other strategic transportation facilities can be attained. While he has concerned himself with some of the problems of public direction and regulation, it is unfortunate that none of the programs that he has described have been put into operation. The reviewer may be able to carry this particular discussion a bit further. Because of local conditions more progress has probably been made in the actual execution of dairy transportation programs in Wisconsin in 1942 than in any other state. Even here, however, the action part of the program has been regrettably slow in developing.

Mr. Hammerberg points out, and rightly so, that in considering dairy transportation programs we are dealing with marketwide problems which must be solved by concerted action rather than by individual truckers or

individual plants. It might be added that the nature of the problem is such (1) that some outside authority must give both sanction and enforcement and (2) that the program must be compulsory for all the operators in an area if substantial economies are to be effected. An illustration will serve to emphasize the necessity of outside assistance. In Pierce County, Wisconsin, a plan was worked out which would have saved about 40 percent of the total miles traveled in assembling milk in that county. All parts of the industry accepted the plan and indicated their desire to place it in operation. It soon became evident, however, that even if approval could be obtained from the Department of Justice, the plan was doomed to failure unless some outside enforcement was provided. All units in the industry recognized that they as individuals, the industry as a whole, and the public stood to gain by the program, but it also became clear that any one individual plant or trucker could gain still more for himself if he could encroach on someone elses territory after the new plan went into operation. Thus, a single individual could bring about the breakdown of the whole program.

Efforts on the part of the local agencies in Wisconsin to obtain assistance from the Office of Defense Transportation met with results similar to those described by Mr. Hammerberg and were equally discouraging. However, the personnel of the Wisconsin Office of Price Administration has recognized the problem and has extended such assistance as it could to the dairy industry in effecting transportation economies. This has been done by making plant and trucker compliance with county transportation programs a basis for tire rationing.

The results that have been obtained in Wisconsin under the new program are outlined in the next paragraph because they serve to demonstrate that the results and claims of certain research studies (which are reviewed in Mr. Hammerberg's paper) are possible of attainment and are not merely theoretical and impractical "ifs" as certain critics may proclaim.

At the date of this writing (January 10, 1943) the Wisconsin Office of Price Administration has received milk route reorganization plans for over half of Wisconsin's 71 counties. Final approval has been given to fourteen county plans providing for savings averaging in excess of 30 percent of total miles of travel. Ten of these are now in complete operation. At least ten other counties have been given tentative approval and have been asked by the Office of Price Administration to make certain additional changes. This latter group of counties has already saved at least 20 percent of total miles. Other counties to date have reported smaller but still significant savings. On the basis of present reports, it is estimated that Wisconsin's milk supply is now being assembled with a saving of 15 percent in total miles. This amounts to a saving of more than 40,000 miles per day or 15 million miles per year. There is reason to believe that these savings can be increased to 30 percent or 30 million miles per year—provided adequate supervision and regulation can be maintained.

The savings reported above have been made with the bare minimum of government assistance. The Office of Defense Transportation "with perhaps the greatest grant of authority ever given to any agency in this

county," to use Mr. Hammerberg's own expression, should have been able to accomplish much more. Unfortunately there has been much confusion and procrastination instead of a positive and aggressive program of action.

Mr. Hammerberg indicates that he believes adjustments in transportation should be in the direction of less competition (e.g., fewer operators) and therefore less duplication of effort, and he intimates further that public action is necessary to eliminate such duplication and waste as exists in the transportation field. He does not, however, give us any clues as to what kind or degree of public action is needed. Such a discussion would have been particularly interesting in view of Mr. Hammerberg's experience in administering a public regulatory program.

Whatever general course public action may take there is one important question which probably should be raised: what are the longer time implications of such reorganization programs? If these programs, or at least parts of them are continued into the post-war period, for which there seems to be a strong likelihood, is there danger that lack of competition may result in the freezing of an existing system of milk transportation and thus tend to prevent future adjustments? What is efficient today may not be satisfactory five or ten years hence. In this connection, it seems important to insert that in the farm assembly of milk, a reduction in the number of operators does not necessarily mean less competition if the program is properly set up and provided some direction is given to this competition. For example, a system of zoning can include a provision that borderline patrons, individually or in blocks, may have the privilege of transferring to another plant or trucker when this does not involve additional duplication. This safeguard, however, may not be fully effective in fluid milk markets where prices paid producers are established on a market pool basis or in the case of retail delivery where a uniform price usually prevails for an entire market and where the interest per consumer is small and the numbers of consumers are large.

A DESIRABLE WARTIME LAND POLICY

JOHN B. BENNETT
National Resources Planning Board

SINCE the war has vitally affected the use of the Nation's resources, it naturally follows that it should have concurrent effects on public policies concerning the land.

From the long-time point of view, probably the most serious effect of war on the land is the heavy load it places on soils, forests and minerals. It was during World War I that wheat acreage began its great expansion in the Great Plains areas which later became the Dust Bowl. So far during World War II, however, there has been no tremendous expansion of crop acreages. Apparently about 356 million acres of crops were planted in 1942. This was an increase of about eight million acres over 1939, but was a smaller acreage than was planted in any preceding year of the thirties. There is some cause for concern over increases in acreages of row crops, especially of peanuts in the South. The effect of these increases may be to bring back into crop production erodible lands which had been abandoned for that purpose and were on their way back to grass or woodland.

On the western ranges, the war and favorable weather have led to increased stocking, probably beyond the carrying capacity of the forage in drought years.

Perhaps more serious than the extension of crops to erodible land and the overstocking of the ranges is the curtailment of soil conservation activities that results during wartime from shortages of material and labor on farms. Striving with inadequate equipment and with little or no help to reach the highest production goals in history, the farmer has little time for those extra practices that are essential to permanent maintenance of the soil.

The increase in the drain on forest resources has been greater than on the soil. Lumber requirements for 1942 are about 39 billion board feet, as compared to an average of 25 billion board feet for the years 1936 to 1940. Total drain on timber resources is up 25 percent from prewar, to about 60 billion board feet annually. This is almost twice the annual growth. Destructive cutting has increased, as has cutting of undersized trees and of already depleted stands of hardwoods.

Similarly, the drain on our mineral resources has risen greatly.

Production of steel ingots, which totaled 57 million tons in 1937, is expected to reach 87 million tons in 1942 and 95 million tons in 1943. Such an increase in steel production would not be serious in peacetime, for much of it would be recoverable in the form of scrap. But the war is sending millions of tons of steel to the bottom of the sea or scattering it beyond recovery on the battlefields of the entire globe. Since about 85 percent of the country's present iron capacity is served by Lake Superior ore, the date when the high grade ores of that region will be exhausted and the iron and steel industry will have to fall back on much lower grade ores is being advanced rapidly. Other mineral resources are suffering similar depletion. Domestic mercury supplies, for example, may be practically exhausted before the war's end. Crude oil production has increased about 10 percent since the beginning of the war, while new discoveries have fallen off.

Dislocation of production and consumption of farm, forest, and mineral products is likely to have more immediate repercussions on our economy after hostilities cease than depletion of land resources. By drastically reducing production in the actual battle areas and in the countries occupied by the enemy, the war has thrown an unusually heavy burden upon the United States. During this war, as during World War I, we are being called on for greatly expanded exports of food, fiber, fuel and manufactured products. These exports probably will be maintained at a high level until the post-war reconstruction period is completed, but eventually they are likely to decline to pre-war levels, unless extraordinary increases in purchasing power in several of the countries which heretofore have had low living standards, or widespread reduction of barriers to international trade, expand foreign markets for some of our products.

In agricultural production our situation is better than during World War I, in that we are expanding output of milk, eggs, and green vegetables, the protective foods of which we need more in our own diets, rather than of grains, whose consumption is remaining stable or declining. If we can maintain adequate purchasing power at home in the post-war period, much of the increased production of these protective foods can be absorbed by our own markets.

Dealing with the War Situation

Regardless of any unfavorable effects of the war program upon land resources, the only conceivable wartime land policy is to use

these resources in the ways that will contribute most toward winning the war. Any other course would be unthinkable. We can no more withhold our land from maximum production for fear that our resources may be depleted than we can withhold our men from battle for fear that they may be killed or maimed. At the same time, it is not good strategy to waste land resources unnecessarily, any more than it is good strategy to expend men and materiel unnecessarily in battle. Much can be done to prevent resource wastage without slowing down the war effort. With the widespread organization of the agricultural conservation program, it should be possible, within limits, to guide the expansion of crop acreage to the more level and less erodible lands. In the grazing areas, the Forest Service and the Grazing Service are in a position to check overstocking on the public lands, and are making a concerted effort to demonstrate that more pounds of meat can be produced through moderate stocking than through overstocking of the ranges. It may be possible, without unduly hampering lumber production, to set up an emergency system of regulations to reduce the worst abuses in timber cutting on privately owned lands.

The Farm Security Administration, the War Manpower Commission, the Office of Education and some of the State departments of education are cooperating on a program to recruit farm labor for highly productive farm areas from less productive areas. There still is a considerable degree of unemployment or underemployment in the poorer farm regions, and this recruiting program might well be expanded to include active recruiting in these areas for industrial employment. Such a program would ease the pressure of population on the poorer lands, at least for the duration of the war, and permanently if industrial employment were maintained at a high level in the post-war period. Permanent removal of surplus population from the unproductive areas could be further aided if a labor recruiting program were followed by zoning to prevent reoccupation of abandoned farms and by a public acquisition program to provide for desirable use of the abandoned land.

Wartime Planning for Post-War Land Use

More can be accomplished during the war in establishing desirable policies for post-war than for wartime uses of land. It is true that the early stages of the war offered meager opportunities to plan for post-war economic activities. The country was preoccupied

with winning the war and there was little public disposition to do anything but work at the immediate task. This attitude was sustained by the ill fortunes which beset the Allies during the early days of the war. Now that the military picture has brightened, however, the attitude toward post-war planning should become more favorable. It is essential that such planning proceed during the war; otherwise, the repercussions of the end of the war on the land resources may be as serious as its beginning.

While post-war land policies may differ in details of application from pre-war policies, their general objectives should remain the same—to maintain the nation-wide condition of full employment that is essential to sound land use, to encourage the use of various types of land for the uses for which they appear to be best suited, to make the land resources provide the greatest possible contribution to production of goods and services consistent with their conservation, to prevent misuse of land with its attendant economic and social ills, to distribute the benefits derived from the land as widely as possible among the people.

It has become almost trite to say that maintenance of a high level of employment and purchasing power in non-agricultural industries is essential to effectuation of a sound land policy, yet this point can not be too frequently reiterated. Any appreciable decline in urban employment invariably forces thousands of families into rural areas, where they usually occupy the least productive lands and create or aggravate a host of undesirable economic processes. Furthermore, the surplus population which results from the high rate of natural increase in rural areas is backed up on farms, where its working members have a low rate of productivity. While discussion of general measures for maintaining full employment is beyond the scope of this paper, it should be emphasized that all such measures form a vital part of a sound land policy.

Classification of rural lands according to their use capabilities and recommended uses has received a serious setback during the war, because of shortage of personnel and abolition of appropriations for cooperative land use planning by the Bureau of Agricultural Economics. Such classification is essential to success of public and private efforts to put the nation's lands to their most economic uses. The effort should not be abandoned. Especially should plans be laid to renew the type of classification that was carried on in the county land-use planning program, which made use of the knowl-

edge and judgment of both the technician and the local farmer in recommending most desirable uses of various land types.

To further the economic classification of land, the programs of inventorying and mapping land characteristics, including planimetric and topographic mapping, the soil survey, the Land Office cadastral surveys, and aerial photographic mapping, should be accelerated during the post-war period. At the present time, the topographic mapping program is being carried on for the War Department by a number of civilian agencies in strategic areas on a contract basis, at a rate much greater than ever before. The extra equipment and personnel which this accelerated program has made available to the mapping agencies should make possible a marked speeding up of all basic mapping programs in the post-war period.

In formulating agricultural production policies for the period following the recovery of European and Asiatic food production to normal levels and the consequent decline in the extraordinary export demands for American food, we need to reorient our outlook so that American agriculture can use its almost insatiable production urge to supply an abundance of food to our people without the devastating results of market gluts and price depressions. Agriculture operates naturally under an economy of abundance; net farm income is highest, or losses lowest, if production is maintained near the maximum, practically regardless of price. Most manufacturing industries, on the other hand, operate under an economy of scarcity; net income from such industries is highest, or losses least, if prices are maintained at the highest possible level, regardless of the resulting decline in production. Agricultural relief measures during the thirties attempted, with some measure of success, to give agriculture an economy of scarcity—to make it possible for farmers, acting in concert, to derive profit from curtailing production and maintaining price. A better procedure in the post-war period would be to give to non-agricultural industry some of the characteristics of an economy of abundance and, through the maintenance of purchasing power, render agriculture's natural economy of abundance profitable by expanding food and fiber markets to the limit of our physical needs for nutrition and clothing. Ideally, it should not be necessary to curtail agricultural production as long as anyone in the country is ill fed or ill clothed.[1]

[1] Some production control measures might be needed under most favorable conditions of nutrition and clothing, to prevent unbalanced production of certain agricultural commodities.

The war has sharply curtailed and, in some instances, practically eliminated, public works for land and water conservation and development. It likewise has hampered planning for post-war resumption of these works. Curtailment of operations, however, is permitting the accumulation by the Corps of Army Engineers, the Federal Power Commission, the Tennessee Valley Authority and the Bureau of Reclamation of a substantial backlog of definite projects for flood control and water retardation, navigation improvements, power development, and irrigation. Many of these projects have been reviewed and rated with respect to their economic feasibility by the National Resources Board.

The Department of Agriculture and the Department of the Interior, in cooperation with the Land Committee of the National Resources Board, have formulated general programs of public works for conservation and improvement of agricultural, grazing, forest, recreational, and wildlife lands.[2] If carried out to the limit of physical feasibility, these suggested programs would require about 20 million man years of labor and cost 25 to 30 billion dollars. Probably none of them is economically justified on such a scale, however. The programs need to be particularized in terms of localized projects, with clear indication of the nature and extent of the operations to be performed, of proper timing and sequence, of priority and of expected benefits in relation to costs. Considerable progress is being made in these directions.

Two immediate post-war situations in the public works field need special attention. The first is provision for work camps, similar to those formerly maintained by the Civilian Conservation Corps, and the second is arrangements for settlement of veterans on the land. While there is no certainty that the Civilian Conservation Corps type of works program will be established on a large scale after the war, there is a strong possibility that, during the demobilization period at least, there will be a demand for such work to cushion the return of men in the armed forces to civilian employment. Certainly there is sufficient likelihood of the establishment of work camps that land administering agencies should now be concerned with preparing programs of conservation and development work that might be carried on from these camps which would be genuinely useful and would yield benefits in excess of costs.

Veterans of every American war have been given preferential

[2] National Resources Planning Board, "Public Works and Rural Land Use." September, 1942.

rights to settlement on the public lands. There is no reason to believe that similar preferences will not be given to veterans of World War II. Up to the close of the Civil War, veterans could find good land on the unappropriated, unreserved public domain for the asking, but this is no longer true. The only substantial areas of good agricultural land not already in use are those that have been or must be reclaimed by irrigation, drainage, or clearing, usually at relatively high costs. While the advisability of a concerted drive for settlement of veterans on the land under these conditions may be open to question, some such drive should be anticipated and adequate plans made for it. Reclaimed lands already available for settlement and those which could be reclaimed in the near future, at costs to the settler within his ability to repay, should be located. Conditions of sale and tenure which would be equitable and provide for stability should be established.

In connection with plans for veteran settlement, the possibility of a Federal program of land drainage and clearing should be given careful consideration. There are large areas of land which might be made productive through drainage and clearing, at costs which generally are lower than the costs of most of the current irrigation projects. Yet there is no Federal agency which reclaims wet land by drainage and clearing, as the Bureau of Reclamation reclaims dry land by irrigation. Local drainage enterprises of recent years do not have an impressive record of success. Whether a Federal program would be any more successful is problematical, but the subject deserves thorough exploration.

There are numerous inconsistencies in laws under which Federal agencies construct and operate public works for land and water conservation and development, especially in the provisions for distribution of costs among the various beneficiaries. Development of corrective legislation along these lines should precede the inauguration of a large-scale Federal public works program in the post-war period. Another legislative question related to public works which deserves public attention is the proposal to require State legislation to prevent abuses of land in private ownership as a condition of Federal expenditures for conservation.

A major land use problem is developing from the huge acquisitions of land for military use. The War and Navy Departments have acquired by purchase, lease, and reservation from the public domain, approximately 20 million acres of land in continental

United States. There are hundreds of separate tracts, ranging in size from city lots to great areas of a million acres or more.

When peace is restored, it will be necessary to retain only a fraction of these military establishments and most of the lands they now occupy will be available for other uses. The areas reserved from the public domain in general will offer no special problem; for the most part they were largely unoccupied and used only extensively for mining, grazing, or forestry prior to the outbreak of the war, and can be returned to the Federal agencies from whose jurisdiction they have been transferred. The purchased and leased lands, however, lie largely in the more populous regions. They include large areas of good farm lands whose removal from agricultural production already has created serious problems of relocating former owners and tenants and has added to the food production burden on other farm lands. Some of the lands were acquired in submarginal farming areas, and should not be reoccupied for farming after the war. Many of the areas would be valuable for such public uses as forests, grazing commons, wildlife refuges, and parks. If no general public program is adopted with respect to these lands, however, they may be disposed of haphazardly, chiefly by public auction, or by individual acts of Congress applying to particular parcels, without regard to their desirable use. They may become objects of undesirable speculation or of ill starred promotion schemes.

A definite program for the post-war disposition of unneeded military lands should be formulated, providing for careful appraisal of the potential usefulness of each reservation and for the designation of those which should be retained in public ownership and of those which should be returned to private ownership. Areas retained in public ownership might be administered by Federal agencies or by States, counties or municipalities. Some form of disposal of areas to be returned to private ownership other than public auction probably would be desirable in most instances. Some of the better agricultural lands might be used for settlement of veterans.

In addition to the special problem of post-war uses of present military areas, there are troublesome questions of management of public lands generally which never have been satisfactorily answered. In the first place, there is no general agreement as to the types of land that should be in public ownership. And there is considerable controversy over whether certain public lands should be in Federal or State ownership. In the field of management policy,

there are questions of the degree of control of private use of the public lands, of the allocation of rights to use of public lands among large and small users, of the charges made for use of public lands in relation to their economic rent, and of conflicting surface and subsurface uses. With respect to organization for public land management, there are frequent jurisdictional controversies, and the old questions of functional vs. vertical or areal organization and of desirable degrees of decentralization of authority for administering public lands. Concerted study and declaration of policy for management of public lands is in order.

While the immediate need for zoning unproductive rural lands against agricultural use may appear to have been alleviated by the employment in war industries of thousands of men of the types that otherwise would be seeking to occupy these poorer lands, there is danger that pressure to settle such lands may increase with the curtailment of war production. State legislators and local government administrators should take advantage of the present situation to enact rural zoning enabling acts and to adopt rural zoning ordinances, in order to prevent occupation or reoccupation of the inferior lands. The rapid increases in industrial and residential occupation of the rural-urban fringes around the cities which have experienced large wartime industrial expansion, has demonstrated anew the need for land-use planning in the fringe areas, and for use of the zoning power in these areas to prevent irrational patterns of residential and industrial growth.

Some permanent system for public control of timber cutting on privately owned forest lands, either through cooperative sustained-yield unit agreements between public forestry agencies and private owners, or through public regulation, appears to be necessary in the post-war period. Whether regulation should be Federal or State is a controversial question. Public acquisition of critical areas of forest and range lands should be resumed when peace is restored. Programming for public acquisition should not be dropped during the war.

The 1943 sessions of State legislatures should provide good opportunity to improve procedures for taking public title to chronically tax-delinquent lands. Rural lands on which owners can not pay taxes in times such as these are likely to be submarginal for private ownership under any conditions, and should be returned to public ownership. The principal objects of improving tax delinquency pro-

cedure are to secure good public titles expeditiously and economically, and to provide for proper classification, administration and disposition of the reverted lands.

There is need for systematic study of our system of rural land tenure and for development of policy concerning methods of improving it. The present tenure system is taken for granted by most persons; nevertheless, there is a widespread feeling that it is far from satisfactory. There is great inequality in the distribution of land resources. There is too much tenancy, and some forms of tenancy are especially undesirable.

Many proposals are made for improving rural land tenure conditions, but usually with little or no regard for the relationship of such proposed measures to our tenure system in its entirety. Certain proposals are made, for example, for limiting rural land ownership to actual farmers, or for prohibiting the use of land as collateral for loans, wholly without regard to the fact that such measures would alter radically our basic conception of land tenure and would have far reaching effects in our entire economic system.

The object of the suggested tenure project would be to trace the origins of and the philosophy behind our system of land ownership in fee simple; to outline its advantages and disadvantages; to describe other systems of land tenure; to consider various forms of improving our system by use of the taxing or police powers or the liberal use of credit; and to analyze the probable effects of such radical alterations in the present tenure system as limitations in the right to own and transfer land or nationalization of land.

WAR DEVELOPMENTS IN LAND UTILIZATION AND POLICY IN THE NORTHERN PLAINS

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TWO MAJOR changes in land use policy are required during war-time. The first is to accelerate the rate of flow of output from land and the second is to shift land uses from peace-time to wartime demands. These are not unrelated changes since a shift in the type of land use, such as from one crop to another, may accelerate the present flow of output.

With respect to acceleration, land is one of the resources which is expendable during wartime, at least up to a certain limit, and the precarious base upon which the survival of our society now rests can justify the expenditure of certain resources currently which might otherwise be saved for the future. A new present-future balance (conservation rate) therefore is required. When we consider the possibilities of substituting land for men, even if this means "expending" certain of our land resources, surely the opportunity cost of that land is less than that of men if its fuller use will save lives at the front or will aid in winning the kind of peace later which will guarantee the manner of living desired in our democracy and in the world.

As to shifting the uses of land, it is trite to say that the demands of war are quite different from the demands of peace-time and as a consequence some land must be shifted quickly from the production of those goods which are less needed to those more urgently desired. But it is not trite to call it to the attention of farmers who hope to avoid the change. Because of the inertia of shifting the present land patterns, there are reasons to believe that the products of land are often more substitutable than the land itself. Consequently, there are some regions in which greater gains can be made by increasing the output of their present products and processing these into the final products most urgently demanded by war. Wheat is an illustration from the Plains region of the Western States.

These two aspects of land use policy, acceleration and shift, are the major topics of this paper. The practical problems which arise in speeding output or in shifting it are considered in general and especially as they affect the Northern Plains.[1] Because of certain

[1] The Northern Plains for this purpose includes the area within the 20″ maximum

unique characteristics of the Plains, such as a very high degree of uncertainty and a very low degree of substitutability between the uses of land, increased present output and shifts from one crop to another have certain effects peculiar to the Plains which are not likely to occur in more predictable or less specialized regions.

When definite national programs are promulgated for such ends as increased production for war, they must be adapted to regional conditions or the production response will often follow undesirable directions. Regional program adaptation applies to the longer time ends directed to stability of a region just as it does to the fullest contribution to the war. The latter end, however, is the one being considered in this paper.

The two technical factors of extreme uncertainty and of low substitutability between land uses in the Plains makes this region unique. With respect to the first, plans of farmers cannot be made without leaving a very large range of variation in yield of crops or of grass to depend, not upon the inputs of men and capital and land, but upon the climatic conditions. With the same input, it is possible for the output in different years to vary as much as two or three hundred per cent from average expectations. Plans which fail to consider the full range of possibilities may imperil the food and fibre needs of the nation.

The second unique characteristic of the Plains, i.e. limited enterprises alternative to wheat and range livestock, means that very drastic changes must occur in relative price levels before significant shifts will occur. Shifts in the use of land are therefore not easily induced and the price elasticity of supply of its major products tends to be low. This raises the question as to whether the Plains cannot make its best contribution by increasing such crops as wheat rather than by growing other crops which may appear more strategic to the war effort.

The effect of these two factors of uncertainty and lack of alternatives are developed in the general discussion of land use policy outlined below.

Acceleration of Current Land Output

Increasing the output of land (or avoiding decrease) for current use can be achieved in two ways: (a) by increasing the efficiency

rainfall boundary of Nebraska, North Dakota, South Dakota, Wyoming, and Montana.

with which the available productive services are combined with land, and, (b) by a shift of labor and capital inputs from increasing future productivity to increasing current productivity.[2]

Increased efficiency.—The increase of efficiency requires rather drastic changes in the present organization of agriculture. The ordinary educational methods used by technical colleges and the various governmental agencies cannot be expected to give immediate results beyond those achieved annually in the past except that a certain inertia may have been removed by the recognition that an emergency exists and the best technical methods must be utilized. Farmers may be more willing to learn that flax does not "wear out" the soil any more than many other common crops, or that wheat can be a very useful feed for hogs when the price ratio is at its present levels. But the ordinary educational channels cannot be sufficiently effective without major changes in the over-all organization of agriculture and the basic attitudes of farmers. This may very well mean a mobilization of the labor and entrepreneurial force on a scale and in a form never before conceived.

There is much evidence to suggest that the available land resources could be utilized to better advantage for maintaining or increasing production by means of changes in the type and organization of farms. With a continued reduction in the amount of labor and capital available to agriculture, more output could be achieved by concentrating the men and machines on fewer, and therefore larger, farms utilizing the same land area. The larger farms generally use less labor and capital per unit of output than the smaller ones. No doubt the small farms have potentials for increase in output if credit, security and land control are guaranteed them but the most promising field for production expansion comes from the full use of medium to larger-sized farms, especially when the increase in food is required in a hurry.

Numerous studies have shown that the small farms usually require larger labor inputs per unit of output than large ones. For instance, in 1936 in Spink County, South Dakota, wheat farms of less than 170 acres required 4.2 hours per acre as compared with 3.9

[2] The "available productive services" include a likely reduction in total manpower, or at least no increase, for agriculture. Certain capital inputs may be available in larger quantity where they are of the type which compete least with the most urgent military needs of the war effort. See: Rainer Shickele, War-Time Adjustments in Farm Tenure. *Journal of Land Public Utility Economics.* Vol. XVIII, No. 2, May, 1942. The same number of the *Journal* contains a discussion of (b) in an article by A. C. Bunce, "War and Soil Conservation."

hours per acre for those between 171 and 600 acres. Even greater differences were found in Nebraska and Oklahoma.[3] In a recent study conducted by the Montana Agricultural Experiment Station it was learned that the small cattle ranches used considerably more labor per animal unit than the large ones. In general, the larger and more efficient farms and ranches, from the labor standpoint, have lost the largest proportion of men to the army and to war industry. By replacing these laborers from the ranks of the small operators a greater production is likely to result than if the small operators remain on small units of land. The scarcity of labor and machinery urges that they be economized by placing them where they will be most productive.

In the range area of the Plains the largest ranches are rapidly reducing their scale of operations due to a more than proportionate loss of manpower. The very large units depend almost entirely on hired labor which is much more mobile and drifts more quickly into the army and industry than the family labor of the smaller units. Whatever its social effects may be, the reduction in number of large ranches has decreased the potential output of range livestock, especially in the more distant and rugged sections of the Plains. At the same time, higher prices and freer credit have encouraged some of the small-scale operators to increase the size of their units, often at the expense of the very large ones. In some cases the land has become available from units operated by older men whose sons have gone to other jobs and who are no longer able to farm. If the trend among the small units toward larger scale could be accelerated by consolidation of the smaller units, without breaking up the larger ones, much might be gained. By the same token, gains could be made in output by channeling available labor to the large units.

Steps in the direction of consolidation of land units were progressing rapidly during the late part of the 'thirties through collective tenure devices such as cooperative grazing districts. Since the beginning of the war in Europe and with the advent of higher prices for livestock, little or no progress has been made in this particular direction. The reversal of the collective tenure trend resulted partly from the decreased activity of federal agencies and partly from the more attractive profits of the industry which encouraged individual operation to avoid the "bother" of cooperation. Instead,

[3] "Changes in Technology and Labor Requirements in Crop Production, Wheat and Oats," Works Project Administration, National Research Project A-10, p. 118.

private owners have been purchasing lands they formerly leased from county, state or mortgage agencies at prices which reflect higher returns to the land factor.

At a critical time like the present, when people are more ready than usual to make changes in their operations, it would seem opportune to develop a national program which would take advantage of this situation and give direction, for instance, to the changes occurring in the transfer of farm lands. Where small farms are increasing in size by absorbing other small units some rational planning to establish consolidated units should be tried. Land parcels are highly differentiated in the minds of both buyers and sellers and very often the contiguous land parcels are not the ones which are either desired for purchase or available.[4] When land is purchased or leased in scattered places, the operators are unable to take full advantage of the economies of scale. A reduction in the differentiation between land parcels which is based on irrational or chance prejudices would allow greater emphasis to be placed on the contiguity of land parcels. Currently labor, gasoline and machinery are being rationed by local boards acting according to rules established by federal agencies so there is reason to believe that land could be handled in the same way. Local boards comprised of interested groups could very readily take upon themselves the task of rationing land to the operators who were in the best position to use it.

Such a program would necessarily require revision in many of the basic philosophies of the farmer and of other people. Basic changes may be necessary in order to avoid even more drastic shifts if optimum production is not achieved and victory fails to come to the United Nations.

Increased current output at the expense of the future.—The above considerations have been related largely to increasing efficiency and utilizing more fully the resources available to agriculture by changing the organization of firms and the combination of resources. Increased output can also be achieved, as mentioned earlier, by shifting resources to present output which are currently utilized in maintaining or building soil resources for future output.

It is not easy to uproot the conservation ideas and practices already current after a period of education and subsidy which was

[4] Differentiation is used in the same sense as in the literature on monopolistic competition. Much of the differentiation in the land market is due to chance inheritance, emotional or traditional desires for particular pieces of land and other more or less irrational preferences from the point of view of optimum output.

designed to increase the rate of conservation of resources for future use. Nevertheless, one of the reasons for past conservation was to have the resources (e.g. more productive land) for use at a period like the present. The very foundation of our way of life, and its future, depends upon the speed with which we can muster all the available resources of men and machines and land to overthrow the forces now threatening our society.

The relative marginal utility of present goods over future ones has been currently raised in several ways. In the first place, unless the goods are made available now in quantities sufficient to win the war, they may not be fully available to the American people in the future anyway, if, as we are led to believe, an Axis victory would mean a draining of our goods to the victor. Certainly the taste of the goods would be bitter under the yoke of Nazi rule. In the second place, the immense amount of material which is drained off during war from the regular channels of consumption increases the marginal utility of the limited quantity of goods available for present use and therefore justifies the sacrifice of lower marginal utility goods in the future, for goods now.

If the above premises can be accepted, then the economist's job lies in finding the rate of use of land which will provide optimum returns for the present without jeopardizing the future more than it would be jeopardized by an attempt to save the land and thereby sacrifice some contribution to victory. The determination of this rate under these conditions is dependent upon social rather than individual ends. During time of total war the use of land is, and must be, guided less by individual consumer desires through the price system than according to policies and programs laid down by group action. These programs are usually directed by the Government which make its wishes known through the medium of price-fixing, persuasion and rationing. This is exemplified by the Production Goals Program with its price floors, bonuses, penalties and educational meetings. Producers' responses also are changed during war. Price expectations between present and future are mixed with patriotic duties as determinants of production plans. In the same way the interest rate is less important as a determinant of the rate of use of land as between the present and future. In the light of these changes it is highly important that the price and the goals be clearly defined as to time.

Expectations are clouded by the greatest of uncertainties because

neither government nor individuals are in the frame of mind, or fully competent, to predict the outcome of the war. Nevertheless, a first step in achieving a desirable wartime land policy is a clear statement of this year's goals, those of next year, and those of the postwar period. This should be done in such a way, of course, that they may be revised as new knowledge becomes available as to the future drift of events. For instance, it makes a great difference to the plans of a wheat farmer or stockman as to whether the post-war aim is full and free international trade, or increased nationalism. It makes a big difference now, too, as to whether the Government is to accept responsibility for maintaining full employment in the post-war period.

Another element of uncertainty which should be reduced by official estimate, even if the estimate may prove wrong, is the probable duration of the war. It is incumbent upon those responsible for setting war time policy to make estimates of the expected duration of the war, which may be revised from time to time. Economic decisions always assume a time period. In agriculture the inexorable biological cycles of crop and livestock production cannot be hurried. Summer fallow must be worked in June to assure optimum output the second following September. Summer fallow neglected this year in the interests of immediate production means much less yield for several years to come. If the crisis is to last one year we may forget about summer fallow this spring, but if it is to last two years we should summer fallow doubly well to assure a larger yield than when labor and machinery will be even shorter than now. In one way or another, all decisions regarding present output of crops or livestock require consideration of succeeding periods.

Employment of resources to increase the long-term future productivity of land must necessarily be subordinated to the needs of the present unless they happen to coincide with optimum present, or war duration, output.

It happens, in the Plains, that many of the practices which maximize current annual output also maximize that of the future in terms of three to five or six years. For instance, the current reduction in numbers of stock sheep on the plains may, as likely as not, increase the output of wool and lamb next summer and the following one. This reasoning is based on the probabilities of a dry season. Normal expectation is that the chances are about 50-50 that next season will be dry. In this case, or even in the case of an average rainfall year, the smaller numbers of animals will thrive on grass

that would suffice for mere maintenance of a larger number. During the past three years of above average precipitation the numbers of sheep and cattle have reached peaks impossible to carry without loss of meat output as well as profit, unless favorable years happen to continue. At the same time, the chance of a dry year in 1943 would seriously jeopardize future productivity by damage from overgrazing, if peak numbers are not reduced. Here, then, increased current output coincides in terms of probabilities, with optimum conservation. In areas where the weather and grass is more predictable it would be possible to increase the livestock-land ratio with more advantage in present output at the expense of the future.

In the operation of wheat farms on the Plains, the attempt to gain greater present output may reduce long-time yields since manpower and machinery will first be removed from the control of erosion. Contour strip-cropping and regrassing of areas sensitive to erosion will be neglected in favor of the faster methods such as straight strip-cropping or full field operations. Weed control would also be neglected since its effects are most pronounced in the years following the operations rather than currently. This is especially true of perennial weeds.

It will be worth the expenditure of some effort to determine and to encourage farm practices and land uses in which war needs are most consistent with long-term stability. This consideration would limit the expansion of wheat onto lands precarious for its production both in war and in peace. So also irrigated land can be conserved and at the same time make its greatest contribution to current livestock output by integrating its hay and feed production goals with ranch needs on adjacent grazing areas.

These illustrations emphasize the need for the best knowledge available of the war's duration. Decisions regarding the probable period of production are vital to the stability of the food supply. Planning for land use must be guided by competent estimates of future needs for the war and immediate post-war periods.

Shifts in Land Use

In general, agricultural land use is directed by an immense number of individual entrepreneurial families who tend to adapt themselves to external changes rather more slowly than in an industry where the number of firms is less. Policy-makers or program directors can get immediate results by talking to a few key managers such as in the auto or aluminum industry. On the other hand, it

takes very great effort to change agricultural land use quickly. In addition to the inertia of its family scale organization, the fixed biological cycles of farm production are deterrents to shift. Nevertheless, some changes can be wrought by use of appeals to patriotism and to self interest through price incentive or regulation.

The question arose early in the Food for Freedom program as to how much the farmers would respond to patriotic appeal and thus shift voluntarily to the most needed crops. No doubt the idea of producing for the "national welfare" has much more appeal when under the banner of "war effort." In general, however, the response will be an increased general effort rather than a diversion of resources to war needed commodities when the latter are less profitable than others. For instance, flax was one of the crops placed high on the list for production goals in the Northern Plains states. Despite the urging to increase the use of land for flax last year as a substitute for other grain crops, the increase in flax acreage in 1942 was only 23 per cent above the 1929–38 average in the four states of North Dakota, South Dakota, Nebraska, and Montana. This represented an increase of 278,000 acres which is at best a diversion of slightly over 1 per cent of the wheat acreage to flax.

The possibility of achieving desired production shifts through price manipulation is limited as long as "parity" ideas continue to dominate the legislative price policy. Parity is now based upon an ancient history of demand and supply relationships which do not reflect those of the current war effort. In the words of John B. Canning, "I do concede that as goals or as a guide to goals of national agricultural policy in the economic orgasms of war, they (parity ratios) are mischievous."[5] Only the income-sharing role of prices is considered by the parity formula. In a war this aspect needs to be subordinated to the production response role of prices. T. W. Schultz discusses this dichotomy in its relation to agricultural policy:

> "Because many of the more important limitations of present agricultural programs . . . are directly ascribable to the fact that there has been no clear-cut differentiation between the problem of allocating resources and of allocating income, it is necessary to establish the significance of this distinction. There is a deep-seated disposition . . . to look upon the economics of resource use and of income allocation as one and the same problem."[6]

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[5] John B. Canning, Rescue Programs and Managed Agricultural Progress, JOURNAL OF FARM ECONOMICS, Vol. XXIV, No. 2, May, 1942, p. 511.

[6] T. W. Schultz, Economic Effects of Agricultural Programs. *American Economic Review*, Vol. XXX, No. 5, February, 1941, p. 129.

As long as the income aspect remains dominant in the making of policy, the failure to achieve the desired allocation of resources for war output could precipitate a drastic step toward regimentation of the agriculturists and the use of land according to technical rules rather than through price rules. If those activating the production goals programs cannot use prices to achieve the production responses they desire, regimentation may be the only alternative. Because increases in output will be required quickly, it may have to be directed from Washington with a minimum of regional and local influence. This would be rather an unfortunate necessity.

The two types of price manipulation which should be most effective in shifting the use of land are (1) discrimination in payment according to the marginal cost of different areas or individuals and, (2) price floors. With respect to the first, as much can be accomplished by a graduated scale of prices as by a general increase in the price of a desired crop, but at much less expense to the Treasury. A uniform price for a crop would have to be set at the same level as the highest rate paid under a discriminatory price policy in order to achieve the same production response.[7]

By discriminating in prices paid (or by subsidy) it is possible to bring into production some of the high cost areas or farms without increasing exhorbitantly the incomes of farmers or the total cost of the commodities. Both of these measures have less applicability to the Plains region than to areas of greater stability and diversity. Where crops may fail altogether, the marginal cost of the crop is infinite and no reasonable discriminatory price policy could be designed to take care of the situation.

In addition to price floors, guarantees against other hazards are required on the Plains before shifts are likely to occur. For instance, technically flax can be produced on a large part of the wheat land now planted to that crop. Agronomists claim that it is less drought resistant and less useful as a weed fighter. On farms and in whole areas of the Northern Plains where weeds are not a serious menace, flax would be grown at present price relationships between the two alternative grains if some acreage guarantee against drought failure were placed in operation. Price floors are meaningless when the crop fails, but guarantees according to acreage would be effective.

Under ordinary circumstances the economy of the Plains is a much more hazardous kind of area than in other parts of the coun-

[7] See: Stephen Enke, Regulating Output Via Multiple Prices, JOURNAL OF FARM ECONOMICS, Vol. XIV, No. 4, November, 1942.

try. To develop flexibility in output there, much more of the planning effort should be directed to providing insurance against hazards than in more stable areas. To induce Plains farmers to shift on a large scale to new crops would require extreme price rises for the desired products. This would cost the consumers or the taxpayers much more than a substantial program of acreage guarantee (insurance) against natural hazards. In either case it is questionable whether major shifts in land use are more desirable than an acceleration of present output of the special crops of the Plains.

Acceleration Rather than Shift on the Plains

It is often simpler to shift the uses of the products of land into new channels than to change the crops grown. This is essentially the same as saying that land is often less substitutable than its products. Where regions have climatic and natural soil conditions which limit closely the variety of crops which can be grown, more may be gained by increasing the output of the specialized products and developing methods of utilizing them for purposes to which they are not ordinarily put.

One unique characteristic of the Plains emphasized above is the technical limitation on alternative crops in dryland areas due to the nature of the land and the climate. Wheat in some sections and grazing livestock in others are the only enterprises reasonably practical. Attempts to shift the use of land in these sections are likely to meet with failure.

It has been the avowed policy of the nation to curtail the amount of land in wheat during the past several years and in the 1943 production goals program. At the same time it has been the policy to make wheat a relatively profitable crop to raise. Why not proceed one step further and utilize the huge stores which have accumulated in the ever-normal granary by processing them into goods most needed for war purposes?

The evidence seems to be quite general to suggest that wheat could be utilized in much fuller measure for the increased production of meat and animal fats if its price were held at a point which would encourage increased feeding of livestock. Individual pressure groups, fearing the reduction of income to wheat farmers, are probably responsible for raising prices above market levels and thereby keeping a large proportion of wheat out of livestock feeding channels. If it is purely a consideration of income rather than of encouragement to production that the price of wheat is held at higher than

ordinary market levels, surely it would seem reasonable to grant the income to wheat farmers and then encourage a substantial movement of wheat into the feed lots through a system of drawbacks (or subsidies) to feeders.

Since it happens that very large sectors of the Plains area cannot raise adequately other crops than wheat, and since this commodity has several alternative uses, wheat acreage might reasonably be increased to produce more oil (through hogs) and rubber (through alcohol). Many of the difficulties of a program to divert wheat-land to flax or oats or barley can be avoided merely by allowing wheat farmers to increase their acreage of the crop for which they are best adapted to produce. If the wheat is moved quickly to feed areas and distillers, storage would be no greater problem than if the land were devoted to some other crop.

Agronomists agree that on many drier parts of the Plains, oats and barley are less reliable crops than wheat. Within certain limits, too, the land will produce more pounds of meat and fats from wheat than from the coarse grains. Coarse grains are less rust and insect resistant, and in many parts of the Plains are not heavy yielders even under good tillage conditions.

This is a plea for recognizing in national policy one of the unique characteristics of the Plains—the highly specialized nature of its land use patterns and the lack of alternatives, within wide price ranges, of technically available substitute crops.

DISCUSSION BY V. L. HURLBUT

Bureau of Agricultural Economics

The writer agrees with the major thesis of Professor Craig's paper—the necessity of considering means of increasing the production of agricultural commodities in the northern plains. The future of the Region as a whole will be influenced by the policies laid down now, and by the programs developed to implement these policies. The main points of difference are on questions of how far to go, and on the implications of some of the principles involved.

The distinction between *acceleration* and *shifts* is a convenient one, pursued to illustrate the methods of increasing total production. Actually, shifts in uses of land are encouraged and made thereby to expand the quantity of essential and selected commodities that will be forthcoming. The manner of implementing the production of selected commodities constitutes the main difference between the agricultural policy of World War II and that of World War I. There should be fewer readjustment problems in the plains in days ahead than resulted from "last time," because of the nature of present policy and its application, as compared to policy during World War I.

One phrase of acceleration—that of expending land resource currently (or, changing the conservation rate) is a significant distinction. But even this phase is inseparably associated with changes in use. For example, a return to wheat production of the crop lands seeded to crested wheatgrass during the last few years would involve a more rapid expenditure of land resource. Fields were planted to crested wheat as a conservation measure. Such shifts scarcely constitute a change in *type* of use, however. The use remains agricultural. The range in substitutability is narrower between types of crops than between crops of the same type. Either flax or barley can often replace wheat, but corn, potatoes, or other intertilled crops usually cannot. Emphasizing the difficulty of distinguishing between *acceleration* and *shift*, and commenting on what constitutes a shift in type of use do not negate Professor Craig's thesis. Instead, they point to how these major changes constitute the central tendency—that of increasing production of selected commodities. The limitations of crop substitutability emphasize the difficulty of obtaining the increase in selected commodities—of which wheat is not one.

In the same sense that, as Professor Hibbard wrote in 1924: "This far there has been no genuine land policy in and for the United States,"[1] there has been no land policy for the great plains. Rather, there have been numerous policies, dealing with phases of land utilization and tenure, and there have been an even greater number of programs designed to affect these policies.

Professor Craig's presentation is far more limited than the title indicates. There is no mention of the relationships between agriculture and other major uses. A land policy for the plains would include provisions concerning utilization and tenure of mineral lands, forest lands, as well as recreational and residential lands. The appraisal is none-the-less realistic, for wheat farming and livestock production are the main enterprises, and agriculture is the predominant type in the hierarchy of land uses in the Region. From the standpoint of discipline, it would also be desirable to have distinguished between land policy, agricultural land policy, agricultural policy, and national (total wartime) policy. Various programs can deal with utilization of land—including pricing, marketing, and specific forms of production implementation through public inducements, but these are not land policy per se.

Non-use of some of the wheat lands may be a wiser policy in the long run than would be a fuller utilization of the wheat. The implications of this statement are appreciated. It would mean a significant revision of the economy of the northern plains. Briefly, manpower and equipment are the present strategic limiting factors. Further implementation now, as a war measure, of some of the trends in process before the war could be a more realistic attack than is involved in finding new uses for wheat. Supplies of feed grains are below total requirements and some of the stored wheat could be used for feeding livestock, as Professor Craig states; but supporting wheat price at a level which will retain wheat lands in production, through conversion of wheat to fat and alcohol mainly postpones

[1] B. H. Hibbard, "A History of the Public Land Policies" Peter Smith, New York, 1939, p. 562.

some of the adjustments that are imminent. Also, dependence on that source for needed supplies of oil and alcohol may be more expensive than their derivation from other sources. Reorganization of existing units and shifting of the lower capacity wheat lands to grass can accomplish some of the necessary adjustment, but such change alone will fall short of both wartime and long time requirement. This type of shift must be related, not only to national agricultural economy but to world trade in wheat as well. Comparative advantage in livestock production under range conditions will have to be subjected to the same scrutiny.

The elements of uncertainty are ones which apply to other phases of economy as well as in agriculture. Professor Craig's point is well taken that such uncertainties have peculiar effect on range livestock, and wheat production, both now and in the post-war era. It seems, though, that the need is for development and announcement of appropriate policy, rather than for prediction of duration. Unfortunately, budget operations of the federal government are on an annual basis, and expenditures generally are limited to the fiscal year. But policy can dictate direction of change and commitments might be made as to the number of years production levels will be maintained and by what means. In this respect the northern plains require special consideration, because of the limiting factors that affect substitution. If the period of guarantee exceeds the duration, then the additional costs might be borne by all the people in the same manner that all the people will bear part of the cost of converting industrial plants to war plants and back when hostilities cease.

Price programs and price supports have been the main instrumentality for increasing production. Any faults in the process of parity calculation have far-reaching impact on specialized production areas. The solution to the problems does not necessarily involve regimentation, unless all concerted directory programs affecting the economic activities of particular groups are defined as regimentation. The main point of concern here is that price floors are *not* fixed at such high levels as will promote significant expansion and require even greater adjustment later.

Price manipulation, including price floors and some sort of payments for hazards are essential if the plains are to furnish essential war foods and maintain opportunities for support of existing and future population. The type of manipulation necessitated is indicated in the paper. The main question to be raised in this respect concerns the possible implications of price manipulation.

The marginal utility of wheat will bear inspection—in itself, and as compared to that of other products, likewise, with the comparative advantage of the area for wheat and livestock production. If operating units can be maintained in specialized and hazardous production areas only by costly support programs, adjustment now may prove to be the wiser and cheaper policy. The war can provide opportunity for instigating necessary land use adjustment equally as well as it can provide reason for maintaining the status quo. This does not underestimate the difficulty of making the adjustment. Instead, it attempts to indicate further the economist's job in finding the rate of change which will provide optimum returns with the minimum disruption.

LAND MARKET DEVELOPMENTS AND THE WAR

M. M. Regan and Fred A. Clarenbach
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DURING the first World War and immediate post-war period, land values surged up to excessive levels in all the principal farming areas. This development, with the associated large volume of farm transfers and inflation of mortgage credit, occurred under the influence of high agricultural prices and incomes and competition in the land market among farmers, investors, and speculators. The subsequent deflation of farm commodity prices and land values led to widespread loss of ownership of mortgaged farms, a lowering of levels of living among farm families attempting to hold excessively mortgaged farms, a less desirable pattern of farm tenure, and increased rigidities that constituted a continuing source of maladjustments in the agricultural economy.

At the present stage in World War II, a number of questions concerning the farm real estate situation are being asked. What are the major features of the present market and how do they compare with developments during the early years of World War I? What are the chief factors likely to determine the course of the land market during the remainder of the war and early post-war period? Is there justification for measures designed to forestall possible undesirable speculative and inflationary tendencies? This paper is addressed to the first and second of these questions.

Movement of Values

Farm real estate values were more stable for the 5 years ended March 1, 1941 than for any other period of similar length in this century. The Bureau of Agricultural Economics annual index of average value per acre of farm real estate (1912–14 = 100) moved within a range of 1 point during the 1937–41 period, from 85 in March 1937 to 84 in 1939 and back to 85 in March 1941. The more substantial increases in the Southeast and in the East North Central States were partially offset, in the national averages, by material decreases in the Northern Great Plains.

During the latter part of 1941, however, marked rises in values were reported in all regions; and in March 1942 the national index stood at 91, indicating an increase of 7 percent during the preceding 12 months. By November 1, 1942, the index was at 93.

Measured from a 1937–39 base, the largest increases to November 1942 occurred in the Southeast (18 percent), in the East North Central States (17 percent), and in the Mountain States (19 percent). The smallest rises were reported from the West North States (1 percent) and New England (3 percent). The United States average increase was 9 percent.

TABLE 1. SELECTED COMPARISONS OF INCREASES IN LAND VALUES AND CASH FARM INCOMES, 1912–14 TO 1917 AND 1937–39 TO 1942, BY GEOGRAPHIC DIVISIONS

	Increase in value per acre			Increase in estimated cash income per acre from marketings and government payments 1937–39 to 1942
	1912–14 to March 1917	1937–39 to		
		March 1942	November 1942	
	Percent	*Percent*	*Percent*	*Percent*
United States	17	7	9	79*
New England	12	3	3	67
Middle Atlantic	12	6	7	66
East North Central	16	16	17	86
West North Central	22	0	1	100
South Atlantic	19	11	15	64
East South Central	20	19	21	69
West South Central	16	8	8	74
Mountain	6	12	19	67
Pacific	22	6	10	80

* The corresponding percentage increase from a 1912–14 base to 1917 was 70 percent. Data are not available for estimating changes by geographical divisions during this period.

A comparison of land value increases from 1937–39 to 1942 with the increases from 1912–14 to 1917 is presented in Table 1.[1] Comparison of movements over longer periods is presented in Figure 1.

Average values for the country during the years 1937–39 were 15 to 16 percent below the 1912–14 level and values in March, 1942 were 22 percent below the level of 1917. In other words, although values were considerably lower just before the present war than before the last war, they have responded, so far, less rapidly to the stimulating influences associated with war. In March, 1917 values

[1] This choice of sets of years yields what is probably the closest and most appropriate chronological parallel between World War I and the present war. The former conflict began in August, 1914 and the current world struggle is conventionally dated from September, 1939. This country entered the first in April, 1917 and the second in December, 1941. Thus 1939 is compared with 1914, 1942 with 1917, and so on.

were 17 percent above the 1912–14 base, but in March, 1942 they were only 7 percent above the 1937–39 average.

Striking differences in regional responses during the two periods are apparent from the data in Table 1. Values so far during the present war have been much less responsive in 6 of the 9 geographical divisions, and remarkably so in the West North Central States. To March, 1942, average per acre values for this region

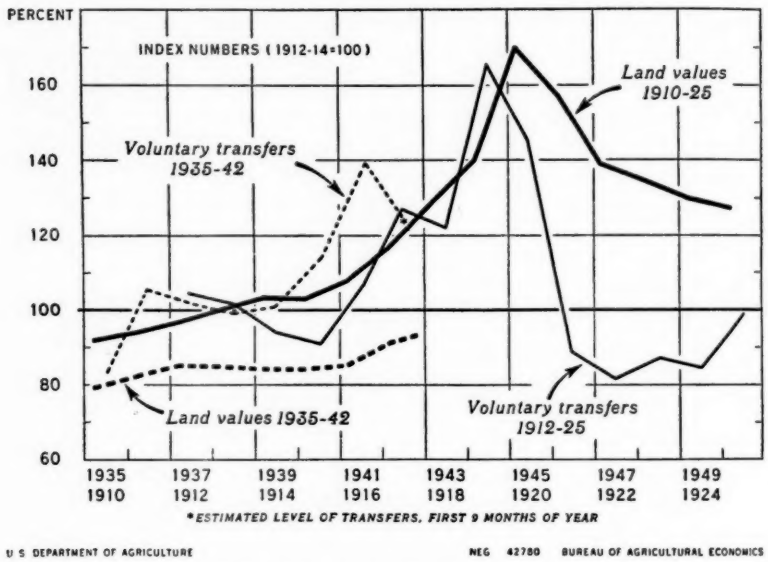

FIG. 1. FARM REAL ESTATE: INDICES OF AVERAGE VALUE PER ACRE AND VOLUME OF VOLUNTARY TRANSFERS, 1910–25 AND 1935–42. (1912–14=100).

showed virtually no change from the 1937–39 base, as compared with an increase of 22 percent by March, 1917 from the 1912–14 base; and the more recent base is 31 percent below the earlier one. In both the East North Central and East South Central States strong responses during the first period have been matched by equal relative responses during the corresponding recent period. Only in the Mountain division has the relative increase been greater during this period.

Volume and Character of Transfers

Voluntary Sales.—The level of voluntary sales during the years 1937–39 was about equal to the level of 1912–14. The volume of

transfers was relatively stable in each base period, although there was some tendency for the rate to decline in the earlier period. During the 1912–14 period the frequency of sales was under that for the immediately preceding years, but probably approached the average level prevailing during the previous decade. In contrast, the levels for the 1937–39 period were materially higher than those for the preceding decade and higher than for any year since 1920 except 1936. In the earlier period, the reduced volume of sales continued into 1915; and significant increases did not occur until 1916. In the later period, however, a rising volume was reported as early as 1939; and by 1941 sales frequency was 30 percent above the 1916 level and higher than in any year since the boom period of 1919–20. Current data indicate that the 1942 volume, for the country as a whole, may be as much as 15 percent below the high level of 1941. But even such a reduced volume for 1942 would be higher than any since 1919–20, except 1941. It is interesting to note that a similar but less marked recession in sales (from a lower level) occurred in 1918.

Important differences in movements of rates of sales occurred among the various geographic divisions. In the North Central States, for example, the index rose through 1917 at about the same rate as that for the United States. From the 1937–39 level, however, the North Central index rose 61 percent by 1941, as compared with a 38 percent increase in the United States index. Sales frequency in the North Central States in 1941 was only slightly below the boom levels of 1919–20, but present indications are that the 1942 figure will be substantially lower.

Types of Buyers and Sellers.—Little or no statistical information is available on who were buying and selling land during the early part of World War I, and hence no satisfactory comparison can be made with current developments concerning this aspect of the market. Information for later years indicates that during each year, 1934 through 1940, more than four-fifths of the farms transferred voluntarily were bought by local residents; about three-fourths were bought for owner-operation; more than three-fifths of the buyers were active farmers (two-thirds in 1938–40); and about half the "active farmer" buyers were tenants at time of purchase. During 1941 and 1942 both the number and proportion of non-farmer purchases increased from the 1938–40 levels; but for the country as a whole active farmers were still about 60 percent of the buyers, and

tenants continued to make up around half the farmer-buyers. In several of the Eastern Corn Belt States the proportion of nonfarmer purchases has recently approached 50 percent.

From 1937 through 1940 about 40 percent of the voluntary sales were made by institutional and individual lenders, about 30 percent by active farmers, and the remainder by retired farmers and others. As a result of the decline in holdings of lenders and other "unwilling owners," the proportion of sales from this group has decreased somewhat during the last two years; and further decreases, at least in absolute numbers, may be expected. Conversely, the proportion of sales by active farmers has recently increased somewhat.

However, for the country as a whole, farmers continued to buy much more land than they were selling. Although owner-operators as a class were selling about as much land as they were buying, purchases by tenants raised the number of transfers to "all active farmers" to a figure about double the number of sales by this class. In the Northern Plains region farmers were buying in 1942 about 10 times as much land as they were selling, while in the North Central region the ratio was about 2 to 1. In the South, however, there appeared no marked net movement of land into the hands of owner-operators.

Major Influences in the Land Market

What are the influences that have operated in the farm real estate market to bring about these movements in values and in sales activity? The number of factors is large and their interrelations are complex. Foremost among the stimulating factors is expanded production at favorable prices, which has resulted in greatly increased farm incomes and land earnings.

Farm Income.—Current estimates indicate that cash farm income from marketings and government payments in 1942 will be the largest ever reported—$15.6 billion, an average of $14.70 per acre of land in farms. After deductions are made for estimated operating expenses, payments to hired labor, expenditures on buildings and machinery, and property taxes: the residual cash return for capital, management, and family labor is $8.3 billion or $7.86 an acre. These items also are higher than for any earlier year. The data do not permit segregation of residual return to farm real estate from the returns to other capital, management, and family labor, but consideration will be given in later paragraphs to movements in net rent of leased farms.

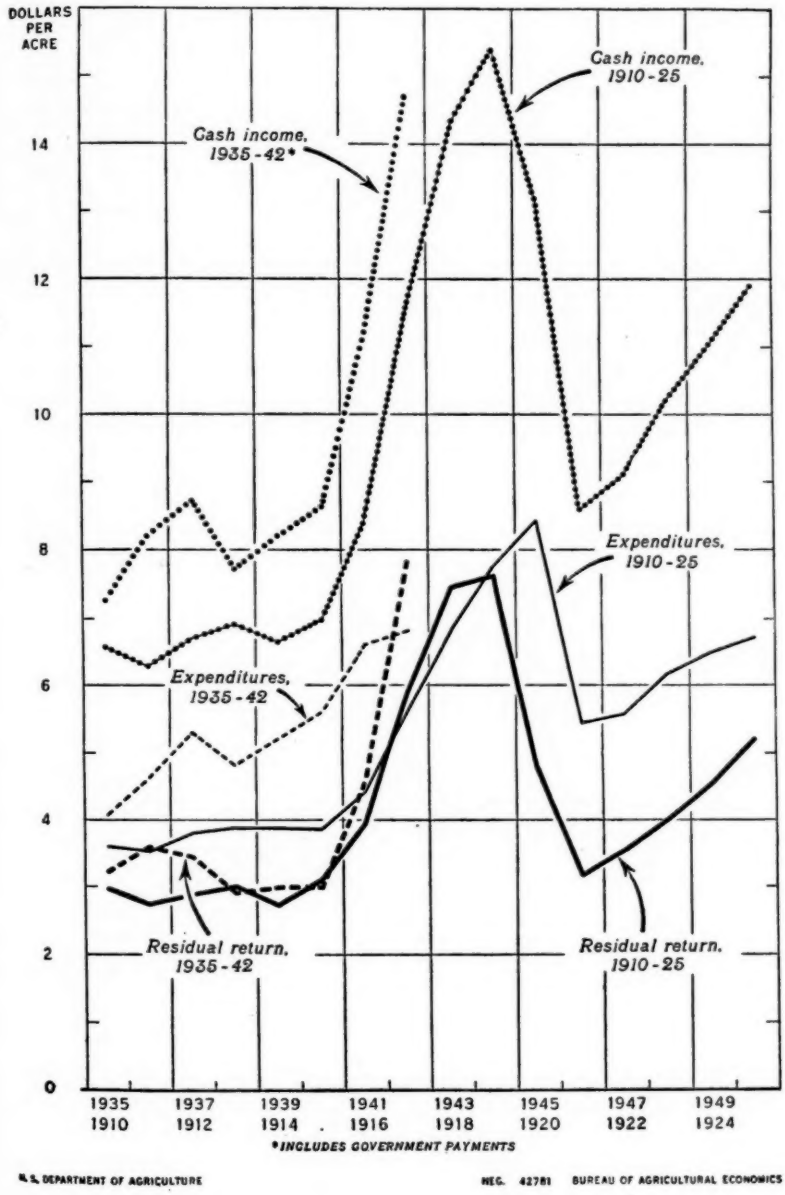

FIG. 2. CASH FARM INCOME, EXPENDITURES FOR PRODUCTION, AND RESIDUAL RETURN FOR CAPITAL, MANAGEMENT, AND FAMILY LABOR—PER ACRE, 1910–25 AND 1935–42.

Estimated cash income per acre from marketings and government payments in 1942 is 79 percent above the 1937–39 average; but the residual cash return (for capital, management, and family labor) is 151 percent above the 1937–39 base. The fact that expenses did not increase as rapidly as total cash income accounts for the relatively much greater increase in the residual cash return. Movements of these series over a longer period are presented in Figure 2. It is interesting to note that, from a 1912–14 base, total cash income per acre increased 70 per cent by 1917, while the residual cash return increased 104 percent.

Rough but nevertheless highly instructive comparisons can be made between the movements of income and the movements of values from 1937–39 to 1942, by geographic divisions as well as for the United States. Data for such comparisons are presented in columns 3 and 4 of Table 1. For the country as a whole the increase in total cash income is estimated, as already indicated, at 79 percent and the increase in residual cash return at 151 percent, as compared with an average increase in land values of only 9 percent to November, 1942. Values were markedly more responsive to income increases during World War I. From 1912–14 to March, 1917 values increased 17 percent, while the total cash income per acre increased 70 percent and residual cash return increased 104 percent by 1917. Values increased 25 percent by November, 1917—compared with the 9 percent increase from 1937–39 to November, 1942. For every dollar increase in total cash income per acre, 1912–14 to November, 1917, land values increased $3.14. The corresponding figure, 1937–39 to November, 1942 is $0.77. For every dollar increase in residual cash return per acre, 1912–14 to November, 1917, land values increased $4.85; and the corresponding figure, 1937–39 to November, 1942, is $1.06.

Since expense estimates by geographic divisions are not available, only total cash income increases may be compared with value increases by divisions, and only for the later years. Values were most responsive to income increases in the Southeast, The Western States, and the East North Central States and least responsive in the West North Central division and in New England. For each dollar of added income per acre, land values increased (1937–39 to November, 1942) $2.14 an acre in the Western States, $1.05 in the Southeast, and $0.91 in the East North Central region, but rose only 12 cents in New England. Despite a doubling of cash income

in the West North Central division, land values for the region as a whole rose only to the 1937–39 levels—from their 1940–41 low.

Contract Net Rents.—In the theory of the valuation of capital goods, expected net rents are a basic element. Individual judgments concerning future rents are strongly influenced by recent and current rent levels, and hence some interest and significance attaches to an analysis of past and present relations of net rent to value. In any event, net rents of farm properties are more closely related to the value of the properties than are cash incomes or even residual cash returns.

From 1912–14 to 1917, net rent per acre of leased land increased 103 percent, while land values increased 17 percent by March and 25 percent by November. From 1937–39 to 1942 net rent increased 102 percent, while land values rose 7 percent to March and 9 percent to November, 1942. Net rent plus landlords' share of government payments increased 86 percent, 1937–39 to 1942. For every, dollar increase in net rent per acre, 1912–14, to November, 1917 land values increased $6.57; the corresponding figure, 1937–39 to November, 1942 (including government payments), is $3.77. Thus, land value responses to increases in net rents have also been relatively much smaller so far during the present war period than during the comparable years of World War I. Movements of estimated net rents, with and without government payments, and values of leased land, 1910–25 and 1935–42, are shown in Figure 3.

Also on Figure 3 are the movements of the ratio of net rent to value during the two periods. The 1942 estimates indicate that this ratio, calculated either with or without landlords' share of government payments, is higher than for any other year during the two periods. The rate is 8.5 percent without, and 9.2 percent with, government payments, as compared to 8.1 percent in 1917.

Other Value-Stimulating Influences.—In addition to factors directly associated with higher farm incomes, a number of other value-stimulating influences are operating. The average effective rate of interest on farm mortgage loans outstanding at the end of 1942 is estimated to be slightly less than 5 percent as compared with a rate just above 6 percent during the 1912–17 period. The difference in rates on loans recorded during the two periods is probably somewhat greater than the difference in rates on loans outstanding, for during recent years the rates on new mortgages have been declining.

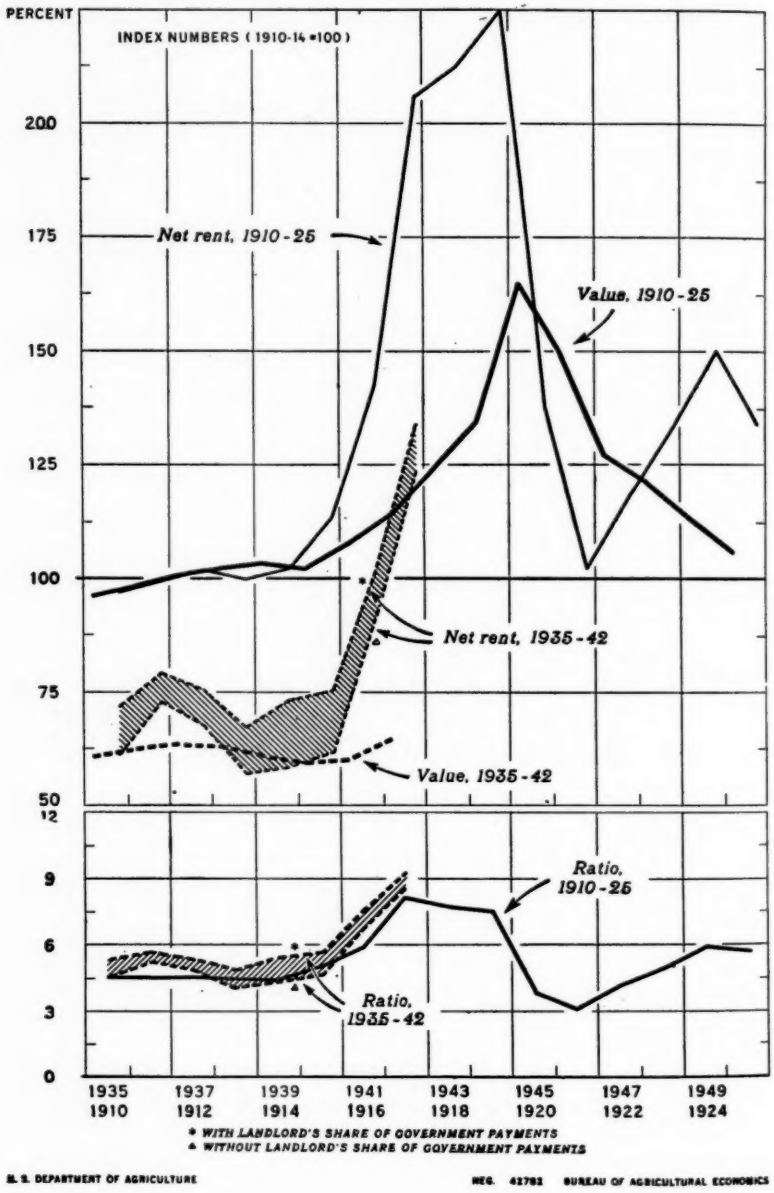

FIG. 3. LEASED LAND: INDICES OF NET RENT AND VALUE PER ACRE, AND RATIO OF RENT TO VALUE, 1910–25 AND 1935–42. (1910–14=100).

Competition among lenders during the last several years has led not only to lower interest rates but also to other more favorable terms to borrowers. In some areas a considerable revival of commercial bank interest in farm mortgages appears to be an element of importance. Continued use of the sales contract device by institutional lenders, particularly in the Northern Plains region, has enabled many tenants and others to purchase land with very little initial equity.

Special Curbing Influences.—What are the influences that may explain the relatively conservative response of land values to increases in income so far during the present war? These influences may be divided into two groups: first, special immediate factors operating to hold values in check; and second, more general forces arising out of fundamental differences between attitudes toward investment in land and differences between the position and outlook of American agriculture in 1917 and 1942.

Much emphasis has recently been placed on farm labor shortages and they probably do have a considerable effect upon the demand for land, particularly from potential investor-buyers. Also, the market supply of farms is influenced, apparently in quite minor degree so far, by actual and prospective labor shortages.

Machinery shortages appear to be considerably less significant than labor shortages as an influence curbing interest in land purchase. As in the case of labor, the machinery shortage is essentially prospective and has not yet significantly interfered with farming operations. Used machinery is selling at high prices, and repair and service problems are expected to increase. Uncertainty as to future machinery replacements is, of course, a bearish factor in the land market, but up to now it apparently has not been accorded more than limited emphasis, at least among farmers. However, this element probably does operate in some degree to inhibit expansion of existing owner-operated units, to discourage non-farmer buying, and possibly to increase the market supply of farms to some extent.

Shortages of fertilizers, restrictions on building, transportation difficulties, and similar factors likewise probably have some effect upon the farm real estate market.

The heavy demands upon individual net income for purchase of war bonds and for income tax payments greatly reduce the volume of funds that might seek an outlet in the farm land market. It is to be noted, however, that the absolute increases in both cash farm

income and residual return are large—considerably larger than for corresponding years of World War I—and that for the present a dollar will buy more land than in 1917. Also to be recognized is the cumulative character of the net positive effects of high incomes upon the volume of funds available for land purchase. Moreover, both the amount and proportion of net farm income absorbed by taxes and war loans might increase, yet the net absolute amount of income available for land purchase might also increase if total net income increased. If such a development occurred, the process of cumulation would be accelerated. So far, a large proportion of "surplus" income apparently has been used for payment of debts and purchase of consumers and producers durable goods, although cash balances have also increased materially. With debt substantially reduced or entirely eliminated for an increasing proportion of farm owners and others, and with decreasing possibilities for purchase of durable and other goods, the surplus funds might be used increasingly to bid up the price of land. This development could get under way before the end of the war; but the chances of its reaching an advanced stage would appear to be greater during the early postwar period, especially if tax and war bond demands are then substantially lightened.

One other major direct influence on the recent and current land market remains to be mentioned. This is the depressing influence of large numbers of farms owned and for sale by insurance companies, the land banks, estates, and other "unwilling" owners. In most parts of the country this factor has now been largely eliminated as a significant element in the market. In the Northern Great Plains, however, it continues as a strong force and is an important element in explaining the exceedingly weak response of land values to income increases in that region. (Other major elements in this explanation are: a general realization of the risks involved and limitations of the area for permanent arable agriculture; and, probably, the prospective effects of heavy annual income taxes upon widely fluctuating incomes.)

Differences in Attitudes and Outlook, 1917 and 1942.—More difficult to appraise than the direct influences are the less tangible elements that may be subsumed under "basic attitudes and expectations." Undoubtedly, however, significant changes in these important intangible factors have occurred during the quarter century intervening between the two world war periods.

During the earlier period the "soundness" of investment in farm property was virtually unquestioned. The historical secular increase of farm land values was continuing and, generally speaking, further increases were confidently expected. Public lands desirable for farming were no longer available. A levelling-off of the population curve was not generally anticipated. Agricultural export markets were favorable and were expected to continue so. There was no accumulated supply of farms in the hands of unwilling owners. Considerable prestige attached to the ownership of land; and, at the same time, investment in reasonably good farms was relatively liquid, for a buyer usually could be found readily. As a consequence, a low ratio of returns to value was acceptable; and probably the effective rate of capitalization of farm income was somewhat lower then than it is now.

During the present period, most farmers and other potential buyers of land appear to have considerably more cautious, less optimistic attitudes toward land purchase. The disastrous experiences of the 'twenties and 'thirties are probably the basic element promoting such caution. In addition, there appears to exist generally a sober and realistic appreciation that the long-run outlook for land values—relative to other prices—is not particularly rosy. Present extraordinary foreign demands for American agricultural products probably cannot be expected to continue beyond several years after the end of the war. Not even the major outlines of a later, possibly more stable world economy can safely be predicted at this time; but it now seems unlikely that the future "normal" foreign demand for American food and fibers will prevent the recurrence of our "surplus" problems. The permanence of agricultural subsidies involving production restrictions is open to serious question; and even a greatly broadened public program of nutrition improvement is unlikely to halt a probable future relative decline in land values in some of the major agricultural regions. Finally, if public policies designed to promote further industrialization and urbanization are successful, and if the advance of mechanization and technology on the farm continues, agricultural land is likely to have a lower market value, at least in relation to other prices.

Conclusion

Strong opposing forces operating in the land market are, at least momentarily, virtually offsetting each other. If farm production

and income should be seriously endangered by shortages of productive factors and other influences, the upward movement of land values would probably be retarded materially. Likewise, heavier taxation and increased absorption of purchasing power through purchase of Government bonds would have a distinct inhibiting influence on the land market. Attitudes of caution attributable to land value movements since World War I are likely to continue as a moderating influence.

On the other hand, the inflationary potentialities of a large pool of excess buying power must not be underestimated. If adequate absorbents are not provided for the large and increasing fund of private money savings and general inflationary tendencies are not held in check, agricultural land could become increasingly attractive as a refuge for capital funds and a vehicle for speculation even before the end of the war. With many of the restricting influences currently operating likely to be relieved shortly after the armistice, the danger of an upsurge in values at that time will be materially increased.

LAND MARKET REGULATIONS[1]

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Iowa State College

NOW is the time to discuss land market regulations and to press for action. If land values begin to boom it will be too late to act effectively. An excellent statement describing the situation and pointing out controls has been written by Regan and Clarenbach.[2] More discussion and suggestions are needed, however, because the problem is more complex than just the prevention of a land boom at this time. In what follows attention will be directed first to the problem, second to the reasons for regulations, and third to a recommended program.

There are two parts to the problem, first an emergency situation growing out of the war, and second a more or less permanent problem arising from a large influx of absentee investors into the land market.

The emergency situation may develop into a dangerous land boom either during a let-up of war pressure or at the end of the war. Relaxation from war activity might occur with the cessation of hostilities against one of our enemies but not all of them. It would not be the end of the war but it would probably give this country a sense of relief and a feeling of increased confidence in victory within a reasonably short time. Many would-be farm purchasers might seize this opportunity to rush into the land market hoping to get their farm before a post-war boom got underway.

This optimistic attitude, which might easily start another boom, is well illustrated by the following interview reported by Editor Donald R. Murphy, in Wallaces' *Farmer and Iowa Homestead* for October 3, 1942:

> Just lately, I went out to find a veteran of the 1919 land boom who had mended his ways and would give good advice to youngsters now.
>
> Friends said: "Go over and see old Tom. He bought two extra farms in 1919 and lost those and his own farm. Along in 1933, he bought again and has been doing all right. He's learned his lesson."
>
> I found Tom putting new shovels on a cultivator.—Tom told about land dealers in his own neighborhood. He shook his head over his own and others' poor judgments. Then he brightened up.

[1] Journal Paper No. J-1082 of the Iowa Agricultural Experiment Station, Ames, Iowa, Project 728. The author is grateful to M. M. Regan for suggestions which proved helpful in the preparation of this paper.

[2] M. M. Regan and Fred A. Clarenbach. Emergency Control in the Farm Real Estate Market, JOURNAL OF FARM ECONOMICS, Vol. XXIV, No. 4, Nov., 1942, pp. 866–882.

"I got a good offer for this place yesterday," he said, "$20 an acre more than I paid for it. All cash."

He studied the cultivator and began to work with a wrench on a shovel that was out of line.

"There's a place north of town I could buy," he added. "You know, the trouble with me back in 1919 was that I didn't know when to get out. If a fellow can just figure the right time, there's a lot of money to be made in a land boom."

That sums up the opinion of many land owners. Land booms are terrible —yes, sir—but it sure would be fine to sell this place at $10,000 profit.

Another likely emergency situation is the post-war period when price ceilings and other controls are relaxed and when damned up reserves, savings and unused purchasing power are available for land investment. The present war came just at the time a large number of tenant farmers were finding themselves in a financial position that would enable them to buy a farm. High income since the beginning of the war has accelerated their rate of savings. Some of them have bought farms, but others are waiting until the war is over. They and others are waiting because of the scarcity of labor and machinery. Moreover, the pressure now is for maximum production which requires the use of savings and reserves to expand livestock numbers and to build up feed inventory. There is an additional pressure to buy war bonds which absorbs other savings not used in expanding the farm business.[3] When these pressures are no longer exerted, there will be a large group of farmers who will be eager and financially able to buy a farm.[4] If no controls are set up

[3] The patriotic motive is providing a powerful restraint on the land market. An example of the feeling which is becoming widespread as the war progresses is represented by the following excerpt from an editorial in Wallaces' Farmer and Iowa Homestead for Sept. 19, 1942:

So long as War Bond sales are behind their quota nationally, there isn't much excuse for any other kind of investment. A farmer with a fair-sized farm, who is looking for an extra eighty acres, or a city investor hunting for a farm to buy, should both be nailed by their local bond committee for more bond buying.

[4] For index numbers showing the extent of land sale activity in the United States since 1912 see The Farm Real Estate Situation 1939–40, 1940–41, and 1941–42 by M. M. Regan and A. R. Johnson, Circ. 662 U.S.D.A., Washington, D. C., Nov., 1942, pp. 42–44. The index figures showing voluntary transfers for the United States with a base of 100 for the period 1925–29 are as follows:

World War I		World War II	
Years	Index	Years	Index
1914	107.3	1939	114.9
1915	103.5	1940	129.8
1916	121.7	1941	158.7
1917	144.7		
1918	139.0		
1919	188.4		
1920	165.3		

before these pressures are relaxed it is liable to be too late because by this time the popular demand will be for the elimination of controls rather than for the application of new ones.

A second part to the regulation problem is an abnormally large influx of city investors into the land market. Already there are situations of this kind in some areas. The danger is that investors may become so active that tenants will find it almost impossible to step up into ownership in certain communities. These absentee investors may be holding the land for a speculative profit, or holding it as an investment with the object of obtaining all the income they can from the land, or finally they may be purchasing for one or both of these reasons plus the desire to have a place to carry out various hobbies or to build a country estate in which to entertain their city friends. Not all absentee investing is undesirable, but certain types certainly are. And the chief difficulty arises when absentee ownership prevents a tenant operator from buying a farm.

Reasons for Regulations

Why set up regulations? Some will say we have too many controls operating as it is, why burden the farmer with more. It will be granted at the start that any added regulations must be justified. And the justification must be more than vague generalizations, otherwise action should be postponed until more definite and clear-cut reasons are brought forth.

The case for regulation rests on three main propositions: first, that controls are necessary to prevent a land boom followed by a depression; second, that regulations will raise the farmer's standard of living; and third, that regulations are necessary to prevent the development of an undesirable land ownership situation. As to the first proposition, it will be shown that the conditions out of which booms develop exist at this time and are likely to increase in their inflationary effect, further it will be shown that controls are the only effective method of preventing booms and depressions, and finally that the terrific physical, financial, and social losses caused by a boom-depression fully justify the use of regulations.

It is evident from these figures that land sales are tending toward a higher peak than that reached in World War I. This is the result of the unusually large number of farmers who lost their farms during the depression and the inability of young tenant farmers to accumulate savings during the depression. Prior to World War I, income had been relatively high and farms were being purchased without difficulty by young farmers.

Virtual guarantees of high farm income for the next two years on top of relatively high income in 1941 and 1942 provide the raw material out of which a full scale land boom could easily come into being. With a hog price floor of $13.25 a hundred until September 1944 plus commodity loans on corn, cotton, wheat, soybeans, and other products at relatively high levels, the farmer has practically no price risk as he looks ahead into the immediate future. Furthermore, the loan program has all the ear marks of becoming a permanent institution, which will undoubtedly act as a land buying stimulant. It is true that there are price ceilings as well as floors but at these ceilings farmers are accumulating surplus reserves at a rapid rate, reserves that may go into land when the war pressure is relaxed.[5] At this time of relaxation, it is likely that the price ceilings will be removed but the floors and especially the commodity loan programs will probably be retained in one form or another. Coupled with high income is the fading memory of the financial tragedies of the last boom and depression. Soon another generation will be on the scene to whom the last land boom is no more than a fairy tale. Finally interest rates are down on an all time low level, which is likely to act as an added inducement to buyers to bid up the price of land. All that is needed to set the land boom in motion is a couple of forces, one would be the relaxation of war pressure, and the other, a psychological attitude of "now is the time to buy a farm."

The government is effectively controlling prices of farm products but is doing nothing to restrain speculation in the farmer's basic production resource—the land. If the price controls were so low that farm income was being kept down on the 1935–40 level, there would be little point in suggesting land market regulations. But with hog prices maintained at no less than $13.25 a hundred until September, 1944 and with corn prices averaging around 80 cents a

[5] Net income to persons on farms increased from $5,386 millions in 1940 to $7,591 millions in 1941, and the increase in 1942 is likely to be even larger. Cash income during the first nine months of 1942 was almost as large as during the whole year of 1941. And this is being accomplished with 500,000 less farms and more than two million less persons on farms than during World War I. (See Net Farm Income and Income Parity Summary 1910–41, BAE, U.S.D.A., July, 1942.)

Net farm income received by record-keepers in Iowa showed an even more striking rise than that for the country as a whole. The state average for 1939 of $2,893 climbed into 1940 to $3,137 and shot up in 1941 to $5,886. Net income per farm on the 1,100 farms for which records were received doubled between 1939 and 1941. Furthermore, bumper corn crops in 1941 and 1942 and a price floor of $13.25 a hd. on hogs are not likely to hurt Iowa farm income totals for 1942 and 1943. (See Iowa Farm Business Records, 1941 Annual Report, Iowa State College, Ames, Iowa.)

bushel, farm income in the Corn Belt is likely to break all time records. Since the government is taking primary responsibility for the price control and farm income situation, it is reasonable to suggest that further control be exercised to prevent speculation in farm production resources, the chief of which is farm land and buildings.

Education, it is claimed by some authorities, is sufficient protection from land inflation and other dangers. According to the argument advanced, the important task is to point out the dangers, make all potential buyers conscious of the hazards and urge them to proceed cautiously in periods like the present when income is unusually high and interest rates unusually low. As part of the educational campaign, farm operators are urged to get out of debt and stay out of debt. Another phase of the campaign is a solemn warning of what may happen if land is bought on credit during periods of high income. The final lesson to strengthen the will power of the farmer is a grim recital of the tragic events which followed in the wake of some particular land purchase during the last land boom.

Education, however, is not enough. It should be used to the full, of course, but to hold it responsible for preventing a land boom would be asking too much. Until more success is attained in stabilizing mass psychology through education, there is little hope of success along these lines in the farm field. The deep and strong currents of attitude and behavior which link pessimistic or depression psychology with low income and optimistic or prosperous psychology with high income are difficult to change. It is still too much to pin all our faith on education and information as a means of averting business cycles and land inflation. Human nature being what it is, other means of control must be used in addition to education.

Controls are justified because of the staggering losses which follow a boom. The financial losses, the product of high values and numerous credit sales, are difficult to visualize. A rise and fall in land values would in itself create nothing more than mental distress. The trouble was not the rise in land values from an index of 103 in 1915 to 140 in 1919 and 170 in 1920.[6] Nor was the trouble the decline in land values year after year from 1920 to 1933. The calamity in this period was the increased land sale activity which took

[6] Source. U.S.D.A., Yearbook of Statistics and Farm Real Estate Situation Circulars.

place when values were at the peak. In the peak year more sales occurred than in any previous or subsequent year for which records are available. Mortgage debt on farms increased from $4,990 millions in 1914 to $10,221 millions in 1920. Then came the slow painful process of liquidation through foreclosure, bankruptcy, and assignment. By 1942, the mortgage debt had been reduced to $6,750 millions but only after thousands of farms had been turned over to creditors. Between 1931 and 1940, the Farm Credit Administration agencies, including Federal land banks, joint stock land banks, and the Federal Farm Mortgage Corporation, acquired a total of 147,000 farms.[7] The total investment in acquired real estate held by a group of selected agencies on January 1, 1937 was over one billion dollars.[8] Each of the farm families represented in these totals had its own particular tragic financial losses, the loss of life savings in one instance, the loss of a farm previously clear of mortgage in another, mental worry and discouragement in still another. Many of the farms suffered heavy physical losses from erosion and overcropping in the vain efforts of the owner to obtain sufficient income to protect a diminishing equity and save the farm from foreclosure. Surely such tragic waste on thousands of mortgage-ridden farms should be avoided if possible. The only certain possibility, however, is some form of regulation over land transactions.

Standard of Living

The second proposition on which land market controls rests is an increase in the farmers' standard of living. Living standards on the farm can be raised through land market regulation. In the past the farmer has often used increased income to bid up the price of the neighboring farm. The tragic results of rising land values, increased debt, followed by depression and foreclosure have been pointed out. If controls can be extended over land values, farmers will be more likely to use added income to improve their homes, the yards around their homes, and provide reserves for old age and emergencies. During the war, the added income can go into war bonds and after the war into the goods and services that will raise the standard of living of the farm family.

One specific goal is the improvement of farm homes and the land-

[7] Annual Reports of the Farm Credit Administration.

[8] Regan and Johnson, The Farm Real Estate Situation, 1939–40, 1940–41, and 1941–42, p. 38.

scaping of the grounds around the farm home. An expenditure in improvements of this kind is a socially desirable goal in contrast to the use of this income for the bidding up of land value. Although this is not the only way that funds can be invested to raise the farmers' standard of living, it is a definite objective, an example of what might be done as an alternative to buying more land. Anyone who has driven extensively through the farming regions can testify to the great opportunity for farmstead improvements that exists. Modernizing of farm homes with plumbing, heating and insulation; and improving the farmstead with more trees, shrubs, better lawns, and flowers would add much to the farm family's comfort and enjoyment. But if any large scale program of this or a similar kind is to succeed, the temptation to buy land will have to be lessened by some form of regulation.

Mark Sullivan in a syndicated article appearing in the Des Moines Register on July 14, 1936, commented at length on this opportunity to improve the farm homestead. He was writing just after he had made a trip to Iowa. The following excerpts are pertinent:

> The trouble with Iowa is not enough evergreen trees in the farmers' front yards and not enough lilac bushes or flower beds.—Iowa farmers have not had, to as great an extent as in Pennsylvania and the east, the instinct of permanence of firmly rooting themselves on the soil they occupy. They have not thought of the farm as home, as a piece of land to own, to avoid mortgaging it as they would avoid sin, to stay on it until they die, and to see their children and their grandchildren occupy it after them.
>
> Possibly the frequent change of ownership and occupancy may be due to too great enrapture about high prices for land. Possibly some of the economic griefs of Iowa agriculture may be due to the same cause. Another risky wisecrack might venture to suggest that an Iowa farmer would rather be in distress on land priced at $200 an acre, while a Pennsylvania one prefers to be comfortable and secure on land priced at $50 an acre. Maybe Iowa would be better off if its land had never risen above $100 an acre. Certainly Iowa has usually been preoccupied with price of land; and usually and perhaps mistakenly thought it was happiest when land was highest.

In a later part of this same article, Sullivan discusses the aftermath of the land boom in the following words:

> In Iowa, the occupant of the farm, renter or owner under mortgage, struggled pitiably under an impossible burden. To pay the rent, or meet interest on a fantastic mortgage, was more than the land could do. He has neither comfort nor pride. He planted no evergreen trees on the front lawn. He let the buildings go unpainted and the farm run down.

> The Pennsylvania farmer has the better way. He is a farmer, not a land speculator, or land investor. He does not count on making a fortune but only a secure living. He stays on his land, improves it steadily, and passes it on to his children. The Pennsylvania farms, seen from the train window between Philadelphia and Harrisburg are well kept and well fenced. The houses and barns are kept painted, the lawns gay with flowers. The Iowa farms seen from a train window between the Mississippi River and Iowa City are by no means so well kept. Yet the Iowa land, as land, is richer.

The contrast which Sullivan has pictured is somewhat overdrawn, but the point is well taken nevertheless. The middle west has much to learn from the eastern regions on investing in "living."

Undesirable Land Ownership

Regulations are necessary to prevent an undesirable land ownership situation. Competition between investors and tenants for farms is weighted heavily in favor of the investors. Since the investor commonly uses surplus funds to invest in farm land he is not likely to be dependent on current income from the land for his living. He can and sometimes does buy land with little regard for the rate of return, what he is looking for is a safe place to invest his surplus funds. Furthermore, the investor is usually able to offer a larger percentage of the sale amount in cash, a factor which may be of critical importance in the purchase of a farm which the tenant operator also wants to purchase. As a consequence, tenant operators often times find it difficult to outbid investors.

Problems caused by an investor invasion are easy to visualize and are not hard to find in real life. Around one small mid-western town, for example, a wealthy investor has recently bought a large acreage of land, some of it formerly owned by farm operators. The new owner is using a lease and farming system peculiar to the neighborhood and one not altogether in keeping with good farm management practice. If only one farm was involved the problem would be slight but in this instance the community is deeply concerned, and rightly, because this new undesirable policy affects a number of farms and may affect others if the investor chooses to add to his holdings. Tenants in the community who had looked forward to owning the farms they are operating have their choice of renting from the investor or of going outside the community to find a farm which they may ultimately own.

Back of this investor buying is the difficulty of finding profitable investment outlets in industry. Heavy corporation taxes have made

the buying of industrial stocks unattractive. The U. S. Treasury obtains such a large share of industrial income before dividends that investors are looking around for other investments where they can avoid this heavy tax handicap. Farm land is an ideal alternative because there is no tax on the income before it gets into the hands of the land owner.

The farm has two other more or less superficial appeals to the city investor. A farm provides a bit of prestige, a trace of aristocracy which is still associated with land ownership. It is often considered a sign of distinction to own a farm or country place where one loses money on pure bred hobbies, race horses, or an elaborate set of buildings. More recently it has become somewhat a fad among business men in the large cities to own a farm or two. Title to a farm is the first requirement for membership in "Farmers' Clubs" which are flourishing in the big cities. The other attraction for land is the feeling of security which attaches to farm ownership. It is supposed to be the final refuge in event of revolution, severe inflation, or a widespread depression. When stocks and bonds no longer yield any return, and when the job in the city is lost, the farm is considered as the one place where a self sufficient existence can be obtained with no dependence on fellow man.[9]

Attempts, some of them successful, have been made to curb the holding of land by non-operating individuals and corporations. Homestead exemption laws, in effect in several states, are a clear cut subsidy to the operating owner.[10] Insurance companies and banks are usually limited by law in the number of years they can hold a farm they have acquired through foreclosure or deed in satisfaction of a mortgage. Moreover, attempts have been made to tax the ownership of more than one farm by the same individual and also to make property tax rates increase with the number of acres possessed by a single individual.

[9] The invasion of the land market by city investors is not mere talk. For example, buying of farms around Chicago by Chicago businessmen has been going on at a rapid pace in recent years. In the north central area of Iowa, buying of farms by investors has been increasing. Real estate brokers in this area commented on the extent of investor buying in a survey made by the Iowa Agricultural Experiment Station (A report on the survey was published in the December, 1942 issue of the *Iowa Farm Economist*, Iowa State College).

[10] "The first of the currently effective measures of this sort (tax preference for homesteads) was adopted by Texas and West Virginia in 1932. Since then 11 additional states have adopted similar measures. In probably at least as many more states proposed constitutional changes or statutory enactments relating to the same subject have received consideration," from an article by G. J. Isaac in *Agricultural Finance Review*, U.S.D.A., May 1939, p. 16.

Regulation of ownership raises a question of whether such a policy would be economically desirable. It is conceivable that production might be more efficient if large corporations owned the land, rented it out to tenants, and provided the tenants with capital and management supervision. But the gain from such a system would not be great under the most favorable conditions because the high cost of supervision over wide distances plus the lack of owner-operator incentive are difficulties that are hard to overcome. More important, any small production gains from an absentee investor corporation system would be insignificant in comparison with the social losses of having farmers reduced from an owner-operator to a tenant status. One of the firmly rooted policies of American agriculture is a thorough going belief in the family farm operated by the owner and his family.[11] What tenancy does exist is considered as a necessary step in the ladder that leads to ownership, or as a secondary objective for those who do not aspire to ownership of their own farm.

Along with undesirable absentee ownership there is naturally some undesirable operation by owners. Examples of flagrant land abuse by unprincipled farmers can be cited. To be sure the extent of this malpractice has been restricted since the advent of the Agricultural Adjustment Administration and soil conversation district activities but the problem still exists. It is customary to look back at the wholesale slashing of the forests as a great national blunder. A similar blunder on an even greater scale was in the making with our soil resources. Fortunately, however, the nation has become aware of the danger.

A Program of Regulation

Three types of regulation or control are suggested to free the land market from objectionable developments. The first is a limitation on farm mortgage credit to prevent a land boom and to reduce post-war indebtedness. The second is a special tax program to soak up the profit from any land speculation which does develop. And the third is a system of permits to regulate transactions in farm land.

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[11] L. C. Gray writes, There can be little doubt that an essential aim of American land policy in the past has been the establishment of family-size farms owned by those who operate them. Yet the means adopted have fallen far short of realizing this objective. Year-book of Agriculture, 1940. U.S.D.A., p. 404.

Credit Regulations

Limitations on farm mortgage credit during a period of high income are an excellent means of avoiding financial losses in a subsequent price depression. If in 1919 and 1920 an effective regulation had been instituted preventing the extension of credit above 50 percent of the value of land in 1917, the result would have been a milder land boom with fewer foreclosures in the depression which followed.

The specific methods of limiting credit and the legal questions involved have been ably presented by Regan and Clarenbach.[12] The President of the United States, according to these writers, probably has the authority under a 1917 act to regulate the extension of farm mortgage credit. Two types of debt ceiling are suggested.

> (1) The amount of secured debt outstanding on a selected date, or (2) a given percentage (e.g., 50 to 60 per cent) of an approved "normal value" appraisal. The outstanding debt would provide a preliminary ceiling which would control unless a higher ceiling were established under an appraisal, which would be made upon request.[13]

Both of these methods suggested would be required to make the program complete.

No credit restrictions are likely to succeed, however, unless the ruling is made effective against private individual loans and particularly purchase money mortgages taken back by the seller as part of the sale price. There has been a tendency to regard the credit situation as under control so long as insurance companies, Federal land banks, commercial banks, and other isntitutional lenders do not liberalize their loans. The efforts of these lenders to prevent a credit expansion will be helpful but these lenders should not be held responsible for what does happen. During the last land boom insurance companies and the Federal land banks were chiefly bystanders because they would not make liberal loans. But this conservative policy did not prevent credit from being granted in abnormally large amounts by individuals and sellers of land. In short, it is necessary to apply credit restrictions to all lenders and especially to the sellers of land.

Fear lest an expansion of short term credit might wreck the mortgage control plan is expressed by Regan and Clarenbach.[14] It is

[12] Op. cit., pp. 871–874.
[13] Ibid., p. 872.
[14] Op. cit., p. 874.

true that the conversion of short term debt into farm mortgage debt did occur after the last boom but a large amount of this debt was unsecured credit which commercial banks and individuals extended to land purchasers without asking for specific security. This practice is not likely to be repeated and will be avoided by banks in all probability because of strict examination procedure.

Taxation

Taxes may be devised to discourage land inflation by absorbing land sale profits. At the present time capital gains from land sales are taxable as net income according to a special set of regulations in the income tax law. But the 1942 Act allows a deduction of 50 percent on capital gains where the property is held more than six months. In consequence the maximum rates for most individuals are around 10 percent on profits from land sold after it has been held for more than six months. This closely approximates the capital gains rate in the Revenue Act of 1918. In the 1918 Act, exemptions were larger, the surtax schedule was lower, but there were no deductions on capital gains. The capital gains taxes paid in 1919 and in 1943 by the farmer with a good income will not differ much.

The farmer who received $5,000 net income in 1918 and in 1942, and sold his farm at a profit in both years, had approximately the following income tax situation. Under the 1918 Act, the exemptions were $2,000 for a married man and $200 for each dependent child. If we assume a married man and three children the exemptions would total $2,600 plus let us say $500 for contributions and other deductions. Income subject to tax would amount to $1,900 and the tax would be $114. If this farmer made a $4,000 profit on the sale of his farm, the additional tax, made up of the base rate plus surtax, would be $363 or not quite 10 percent of the profit on the sale.

The farmer who received $5,000 net income in 1942 and had the same marital condition as the farmer in the preceding example, would pay a much heavier tax on his farm income, but about the same amount on the profit from the sale of his farm. The exemptions would be slightly lower, $1,200 as a married man and $350 for each child or a total of $2,250. The tax on the farm net income of $2,250 would total $435 or almost four times the tax paid under the same conditions in 1919. But the $4,000 profit from the sale of the farm in 1942, assuming the farm had been held more than six months, would add only $450 to the tax or a little more than 10 percent of the profit made from the sale.

A special tax on resales, a farm bought and sold again within a specified period, is advocated by Regan and Clarenbach.[15] By taxing heavily the profits from reselling a farm, these authors believe that speculative activity can be largely eliminated. There is no doubt that speculative buying would practically vanish if the rates on resale gains were high. But such a tax would not deter investors and farmers who are buying not for resale but for permanent investment or operation. Nor would it necessarily prevent a stampeding of the market by these buyers or prevent the selling of a large number of farms not transferred in recent years.

Profits from all land sales, not just resales, might be taxed. To do this, however, a base value as of a certain date would have to be established whenever a farm was sold. The date the tax law is enacted could serve as the date for the value base. The profit would be the difference between the base value and the sale price. Federal appraisers could be used to establish base values. Any improvements made between the base date and the sale would have to be taken into consideration but this would be necessary with the resale tax also.

A land transfer tax, worked out in considerable detail, has been suggested by J. A. Baker as a method of restraining speculation and preventing a land boom.[16] His plan is to have the present Federal tax on deeds of conveyance expanded into a heavy tax on all land transfers. The present tax, requiring stamps on each deed at the rate of $1.10 per $1,000 of consideration, is purely a revenue measure but under the Baker plan it would be stepped up progressively. The tax rates would vary inversely with the number of years since the previous transfer and directly with the increase in price over the previous sale price. For example, if the present sale price is not more than 20 percent above the previous sale price, the tax rate on the capital gain would vary from 0 if the farm had been held for 20 years or more to a tax of 40 percent on the gain if the farm had been held less than one year. The highest tax rate would be 90 percent of the gain on farms sold more than once within a year at a profit of 100 percent or more. These rates, of course, are merely suggestions by Baker, but they indicate the working of the tax.

A tax of some kind would be useful in preventing a burst of land speculation. A stiffer capital gains tax in the present income tax

[15] Ibid., p. 875.

[16] The Graduated Farm Land Transfer Stamp Tax. *Journal of Land and Public Utility Economics*, Vol. XVI, No. 1, Feb. 1940.

schedule would help. A special land profit tax whether based on resales or on all transfers would likewise prove helpful. As a matter of fact, the difficulty is not in deciding which tax to use but it is in obtaining the enactment of any tax for this special purpose.

Permits to Buy Farms

A system of permits for the purchase of farm real estate may be the chief answer to the land market problem. Credit and tax controls will help but they will not insure a stable owner-operator community life. If the opportunity for tenants to graduate into ownership is to be maintained, a permanent plan of regulation must be instituted.

The requirement of a permit to buy a farm is a reasonable proposal. Anyone starting a business in a city would expect to obtain a license or permit. Zoning regulations in a city are specific as to where different businesses may be conducted. The same kind of conditions faces the city resident who plans to build a residence. Certain areas are limited to certain types of buildings and to minimum amounts that must be spent. It is not possible to build a shack, an apartment house or a store on any lot in the city. The development of a desirable city plan requires limitations on the rights of individuals to build what they want and to do business where they choose in the city.

The time has finally come when zoning and similar regulations are desirable in the farming areas. Permission to erect a tavern or roadside market along the highway is essential in the country as well as in the city. Regulations to prevent unwise, hit and miss settlement are also recognized as desirable. The pioneer work of George S. Wehrwein in this rural zoning field needs to be expanded. Regulations are in order to limit absentee-ownership and to maintain opportunities for tenants to buy a farm home and business.

A permit system for purchasers of farms would be a direct method of furthering ownership by farmers. In the past the Federal government has attempted to create a large group of farm owners through the Homestead Act and later through the Federal Farm Loan Act. It is only recently that Congress tackled the problem directly through the Tenant-Purchase program. State governments have also followed an indirect method for the most part in their policy of granting homestead exemptions on taxes. All through the years it is evident there has been a strong undercurrent of popular

support for measures designed to assist the farmer in becoming a farm owner. But, as Gray has written, the difficulty has been the extreme freedom of disposition which has attached to land.[17] He suggests that the time may be at hand when this freedom should be limited in favor of the general welfare. He writes:

> There is growing opinion that land is vested with a paramount public interest, that private land-ownership is granted by society rather than being an inherent individual right, and that when it comes into direct conflict with the general welfare either it must be restrained or the land must be converted, with due compensation, into public property.[18]

A permit system would be operated on a state and county basis. Each state would pass an act providing for the issuance of real estate purchase permits by county boards. The Act would prescribe a set of regulations under which permits would be granted by the local authorities. The county recorder, auditor or some other county official would be delegated by the county governing body to issue permits to all who apply and meet the regulations. Any individuals who are denied permits would have the right of appeal to the county board and also to a state board.

To obtain a permit the purchaser would have to state whether he intended to operate the property himself or lease it to a tenant. If he did not intend to operate the land, he would have to specify the individual or management agency who would manage the property as his agent. He would have to indicate his ability to finance the purchase and to maintain the property. If the percentage of tenancy in the county and in the local township was above a certain figure, permits for absentee purchasers would be denied or subject to certain restrictions. Any absentee investor who applied for a permit to buy more than one farm in a community or who already owned one or more farms would also find it impossible or difficult to obtain a permit to buy additional land unless the country governing officials approved. The details of a permit system would vary but the general principle of regulating ownership in the interest of the farmer would hold in all cases.

A permit system may sound revolutionary and in one sense it is because it means a new approach to an old problem. But other nations, especially those in Europe, which have wrestled with the same problem for years, have been moving toward this new and

[17] Yearbook of Agriculture, 1940, p. 404.
[18] Ibid., p. 402.

direct approach.[19] The Netherlands, for example, took action in 1940 along the following lines:

> In this country (The Netherlands) the General Secretaries of the three Departments of Agriculture and Fisheries, Finance and Justice, promulgated a decree on November 27, 1940, according to which it will be necessary, in each case of alienation of farm land, to produce a declaration from the competent Bureau of Leases attesting that there is no objection to the price asked, to the conditions of sale and to the person of the purchaser, and also that the general or particular agricultural interests are in no way prejudiced.[20]

Regulations will eventually be set up for the land market. It is important for the welfare of the farmer that they be designed with care to accomplish specific objectives. Among the objectives, two stand out as of primary importance, one preventing land inflation or a land boom, the other keeping farm ownership open to the farm operator.

[19] See Karl Brandt. Public Control of Land Use in Europe, JOURNAL OF FARM ECONOMICS, Vol. XXI, No. 1, Feb. 1939, pp. 57–71.

[20] G. Costanzo, The Agricultural Land Market and Its Control, Monthly Bulletin of Agricultural Economics and Sociology, International Institute of Agriculture, Rome, No. 5, May 1941.

LAND TENURE IN MEXICO

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Historical Background

CONCENTRATION of landed property in the hands of a few constituted a fundamental socio-economic problem in Mexico even before the conquest by the Spaniards. The social and economic history of the country is, in essence, the history of land tenure and of the struggles for the possession of land.

In the time of the Aztecs—the dominating tribe in Mexico which was already decadent when the Spaniards arrived—the land had become almost the exclusive property of the privileged classes. The lower classes worked the land for their benefit and could use only very small areas for cultivation. This situation was the result of an increasing of latifundia in the hands of the King, the nobility, and the warrior and the ecclesiastical group—that is to say, the superior social strata of those times. Really, the land tenure system had been well organized. The towns were divided into sections, each having communally owned lands for cultivation, called *calpulali;* these were divided into lots for the individual use of the families. Other kinds of lands not for cultivation were designated for communal use. Called *altepetlali*, they were for such uses as for hunting, fishing and taking of wood.

But, with the increasing of the population (perhaps Mexico was more densely populated before the conquest than at the present time) the lands of *calpulali* and *altepetlali* came to be insufficient. Moreover, the tribes that were dominated by the Aztec Empire were obliged to pay large tributes. This situation was well exploited by the genial Cortes, who played upon the feelings of dominated tribes and threw them against Tenochtitlan, the capitol of the Empire. In this way one of the first of the great paradoxical events of the history of Mexico took place: the conquest of New Spain was performed by the native Indians.

This fact has great importance from a social viewpoint. Our country's birth as an Indo-Hispanic nation was by the union of two races, and not by the displacement of one race by another, as in the case of the United States. The Indian chiefs, who helped with the conquest, received honors, titles of nobility, and lands from the Spanish King just as did the surrendered Aztec imperial family.

Cortes and the Spanish captains married daughters of these distinguished Indians and the Spanish soldiers took Indian wives, having come without families. That is why we, the Latin-American people, celebrate the twelfth of October as the Day of the Race. The discovery of America means for us the birth of a new race: the Indo-Latin race.

These facts indicate the Spaniards' respect (at least theoretically) for the Indians' rights to the lands. Orders of the Spanish Crown repeatedly provided that these ownerships must be respected. The *Encomienda* was not a system of land tenure, as is often believed, but rather a system of partonage for the Indians, closely linked with the religious instructions provided them.

But during the conquest and throughout the colonial period the Spaniards took for themselves, by right of might, large areas of the best farming lands. The King of Spain gave the lands to the conquerors under the name of *Mercedes Reales*. In the colonial period the amalgamation of the races took place slowly; a silent and peaceful but deep struggle developed among the Spaniards and Indians, mainly for the rights to the land. A Mexican sociologist, Don Andres Molina Enriques, has been distinguished for his interpretation of Mexican history as a history of the struggle among ethnic groups. During this struggle the lands claimed by Spaniards were becoming ever larger in spite of the provisions of the Laws of India, always designed to protect the Indians, and the efforts of benevolent missionaries who were defenders of the person, rights, and possessions of the Indians. Thus, conditions were similar to those that prevailed before the conquest. The land passed slowly from the possession of the Indians who held it in small units into the hands of another group of wealthy landowners, civilian as well as ecclesiastical.

The Spanish colony thus rearranged the system of property only slightly, conserving the prevalent forms of land tenure. Instead of the *calpulali* they created the *lands of communal distribution* (tierras de común repartimiento); in the place of the *altapetlali* they created the *ejido* (communal lands not for cultivation); and coexisting with these forms were individual ownerships of the Spaniards and of a few Indians. There were legal provisions, not only with respect to the lands possessed by the Indians before the conquest, but also for granting lands to the new villages formed by the Indians or the Spaniards.

At the end of the colonial period, there was notorious discontent among the masses on account of the land situation. When the Hidalgo's movement broke out, the Viceroy, to stop the revolution, ordered a distribution of lands among the Indian villages. But it was too late. The great commander of the independence war, Don José María Morelos, who made the Declaration of Independence, was a radical agrarian leader. He broke up the great plantations to create numerous family-sized farms.

The Catholic Church, especially toward the middle of the nineteenth century, became the largest landowner of the country but the Reform War brought the nationalization of the ecclesiastical property. But in the long run, this merely brought about the transfer of property from the hands of the Church into the hands of civilian landowners, and the Indians suffered new losses.

Conditions at the Beginning of the Agrarian Reform

Later, during the regime of General Díaz (1884–1911), the legislation regarding idle lands, instead of breaking up large estates, kept the conditions as they were; in fact, farms (haciendas) as large as a State the size of Florida (up to 2,500,000 hectares, approximately 6,250,000 acres) were then to be found. These were true feuds, where the supreme authority was that of the lord of the territory who dealt justice by his own hand and whose laborers worked under a sort of compulsory work system. Under the laws on idle land many usurpations of land of small and common farms took place.[1] For fulfillment, the government insisted on the individual allotment of the lands of the villages, it created a system of compulsory draft to form the Army, and it carried on a sanguinary fight against a strong tribe of Indians besides conducting the bloody repressions of the labor movements.

Incipient industrialization, railroad construction, and the development of commerce brought a great scarcity of capital and some lack of manpower. Haciendas began to disintegrate from lack of capital and, to put a stop to the increases of wages, the semislavery conditions in the haciendas were strengthened. A powerful aristocracy of landlords—many of whom diverted their money and attention to industry, banking, and commerce to the neglect of the management of their estates—were at the top of the social, econom-

[1] See: Circular J-D, Number 6 of 13th March 1941.—Memoria 1940–1941. Departmento Agrario.

ic, and political structure. Discontent among the people became tremendous. The government at last understood the situation and, to prevent an explosion, founded the Bank of Loans for Irrigation and Agricultural Developments (Caja de Préstamos para Obras de Irrigación y Fomento de la Agricultura), and began to lay plans for an agrarian reform.

But the time of this great dictator was over. The Revolution of 1910, like the fall of the Aztec Empire, the Independence War, and the Reform War, had a well-defined agrarian character. Leaders of this revolution, when it was won, were forced to undertake at once the solution of the agrarian problem in order to satisfy the popular impulses. No plan had been formulated but action became urgent.[2]

The Agrarian Reform

The uneven march of events, the variations in the rhythm of action, and certain hesitations and changes in the agrarian policy and legislation from administration to administration are due to the fact that fundamental plans and no sound theoretical and doctrinaire basis had been developed for the work of reform. In the most recent stages of the agrarian movement certain influences of socialistic doctrine have stimulated the substitution of the system of collective cultivation for the common land allotment and a few other changes.

During the period of the agrarian reform (1915 to date) the agrarian problems have been considered from varying aspects. Means employed for their solution have undergone changes in accordance with the various laws and with the criteria of the persons who have applied them.

The real leader of the movement was Emiliano Zapata who perseveringly struggled, in succession, Díaz, Madero, Huerta, and Carranza until he persuaded the Carranza government to set the basis of true reform by issuing the Law of The 6th of January, 1915 which was later declared as constitutional. Ever since, the distribution of land has been ruled by Article 27 of the General Constitution, and by the Agrarian Code. To review here all of the successive amendments and additions to the agrarian laws would require too much space; only a general outline of the process followed by the reform will be sketched, the main contents of the more notorious legal enactments being underlined.

[2] See: Lecture of the Head of the Agrarian Department, broadcasted 15th June 1941. Memoria 1940–1941.—Departamento Agrario.

Article 27 of the General Constitution of 1917 holds that both the lands and the waters included within the national territory fundamentally belong to the nation, which transmits dominion over them to private individuals and which may restrict such dominion in whatever manner may be dictated by public interest.

The basic form adopted for the distribution of the land, from the initiation of the reform to date, has been the donation and restitution of lands and waters to the communities (not to individuals) to be possessed in common, although in the majority of cases the enjoyment of the farming land is individual. The land possessed in common by a village is called *ejido* (the common lands) and cannot be sold or mortgaged. Benefits derived by the villagers are conditional, as they are under an obligation to cultivate the land personally. If this is not done, their right to the lot is lost.

Within this basic form, and also outside of it, various methods have been used in the distribution of land. In accordance with the basic restitutional nature of the Law of the 6th of January, 1915, it was intended in the beginning merely to return to the villages such common lands as had been usurped. The first stage of the agrarian distribution was thus to be of a recovering character, leaving the donatory aspect to a secondary plan. This would have given the agrarian reform a much milder character than that which it actually acquired; the idea was merely to restore what had been improperly acquired by the large landowners. But since the titles had been lost (or had never existed because the possession in common dated from the Aztecs) difficulties were at once encountered by the villages in trying to prove their ownership. These brought the first change in the agrarian distribution: the next idea was not to restore but to endow all the villages with the necessary lands.

The Size of the New-Created Farms

Lands have always been granted to the villages in very small portions. Generally, to obtain more land restoration was demanded; thus the area to be received was not limited by the law, but depended on the extent of the usurped land. But as frequent villages have increased in population they have outgrown the lands which at one time were large enough for their necessities. So this system did not succeed.

Of all the *ejidos* existing at present, only 159 with 1,723,321 hectares (data including from 1916 to 1941) have received land by way of restitution. Much less sufficient were the lands, in general,

when the system of donation was followed. The area of the lots granted was insignificant, and there was a considerable shortage of lands available for that purpose among those to be affected within the radius set by law. The Agrarian Code in force ordains that the land should be distributed in lots of either 8 hectares of ordinary land or 4 hectares of irrigation land per man. If there is not land enough and several peasants remain without land, the men who are granted land are chosen in a sortition.

This system came into existence only two or three years ago. Earlier when there was not land to give each man the wanted lots, the available land was distributed among all peasants of the villages. This fractioning of land in such small portions is the most serious secondary problem arising as a result of the land distribution.

Those who have wished to obtain larger lots have had to resort to the colonization law, and seldom to the local laws of the Division of large Estates, with the obligation to pay in twenty yearly instalments, the price of lands which they have thus acquired. The common villagers have been exempted from any obligation to pay.

At first it was not the idea to destroy the large estates; it was thought that the common lands should serve the inhabitants of the villages merely as an aid to maintenance, and that the villagers should continue to work for the neighboring farmers. This made the *ejido* analogous to the *pegujal* or *acuaro*—land which some owners used to let their peons or laborers use so that they might eke out their maintenance by means of their own cultivation. The *ejido* would therefore weaken the absolute economic dependence of the peon on the landowner, but did not abolish such dependence.

It is possible to observe the effects of the allotment policies in the usual allotted common lands. In the truly collective *ejidos* the main trouble has been the large number of peasants in relation to the extent of the land. Frequently these common landowners, besides cultivating the common land, are already engaged as laborers on the medium-size properties in the neighborhood, or work at home in typical industries or have other kinds of work. Only one-half of the common-land owners listed in the census of 1935 and 85 percent of those listed in the census of 1940 used the common lands as their main source of income (this does not mean the only source). The rest supported themselves chiefly by other activities, the products of the common lands being only complementary.

Unfriendliness arose between the landowners and the new com-

moners, which frequently meant that the commoners were unable to find work as laborers, and had to depend entirely on the cultivation of their own lots and then it was clearly seen that the lots, as granted, were entirely insufficient. Again, the agrarian reform received a new impulse. It was said generally that these lots did not constitute "economic units," they were not sufficiently large to absorb completely the working power of the peasant with the help of his family, and they were not large enough to provide the necessary subsistence for the commonland villager.

The first official acknowledgment of the quantitative deficiency of the donated land was made by President Cardenas in 1935. Since then, both through legislative change and through changes in the official criteria, a noteworthy increase in the average lot endowed has become evident in the statistics. The law, in speaking of the usual units of 4 and 8 hectares in size, refers to them as the minimum amount of land that each peasant must receive.

The last step forward has been accomplished under the Presidential Resolution of February 12, 1941, which gives the basis for increasing the lots in the region called "La Comarca Lagunera" up to a maximum of 8 hectares in irrigated lands. The *ejidos* of the Mexicali Valley in Baja California are an example of the tendency to enlarge the lots. Individual lots of 20 hectares in irrigated lands are now found there as well as collective *ejidos* with a rate of more than twenty per man.

Variation of policy can be seen by comparing the percentages of *ejidatarios* that have as main source of income the products of the common lands (the comparison that was made above), and by a comparison of the average size of the lot for all of the *ejidos* (with the same proportion of tillable land) with those that have been granted in the last few years. The latter comparison is as follows: All the *ejidos* in 1935 averaged 3.5 hectares in size, all the *ejidos* in 1940 averaged 5.8 hectares, and the *ejidos* granted in 1941 averaged 7.0 hectares, or twice as large as the average in 1935. The increase in size is due to the tendency of the last few years to enlarge the lots, and to a certain movement of concentration that took place spontaneously within the *ejidos*.

Rights of the Villages to Receive Lands

The rights of the villages to receive lands have also undergone changes. At the beginning, many requirements were necessary but

gradually these limitations have been simplified so that now even the *peones acasillados* (permanent laborers of the farm) have the right to petition for endowment of lands from the farm where they are working. In this way the final division of the large estates was begun under the slogan: The land for those who work on it.

Allotment and Collective Enjoyment.

The primitive idea that, notwithstanding the fact that the land was common property, the enjoyment of it remained individual—the allotment of land and issuance of the deed being made in the name of the head of the family, and the lot considered as his "family heritage"—has also been modified. A policy toward collective cultivation in the form of cooperative organization for production has evolved, thus abolishing all the boundaries of the lots.

Two classes of allotments are found: In the economic class are those which are usually made through granting the endowment (except in the case where collective cultivation is to be established). During the time this kind of allotment is in force, certain concentration of the lands may take place for some of the villagers virtually abandon the common lands making it possible to enlarge the lots in general, or to enlarge some of them. These figures suggest the degree of that movement: the number of beneficiaries of the distribution of lands until 1940 was 1,767,498 whereas according to the census of that year the number of peasants in possession of common lands was only 1,225,774.

The other form of allotment is the legal definite allotment. For a considerable time, this form had rare application, comparatively speaking. In June 1938 only some six hundred common lands were thus allotted; and during 1939–40 this procedure was applied only in exceptional cases. On October 1940 the number of *ejidos* allotted was 1,135.

The agrarian code has always had a provision relative to the *patrimonio parcelario ejidal* (common land heritage); but the legal allotment was abandoned because of the tendency, from 1935 to 1940, toward the practice of collective cultivation, and the belief that the allotment would be a drawback against such tendency. The movement was fostered by the Law of Agricultural Credit of 1935, which ordains that the credits granted by the National Bank of Common Land Credit must be in priority for the benefit of common land owners who cultivate the land in the manner mentioned.

But beginning in 1940, the new government has emphasized the

importance of the legal allotment,[3] and has dedicated a large staff to that work. At the same time it gave less importance than the last government to the tendency toward the collective cultivation. The fact that this form or organization is pointed to, politically, as an example of communistic tendencies in the government may account for the fact that it has not been widely developed. At present there are about 950 *ejidos* in collective cultivation in the most productive and richest regions of the country.

Through unavoidable circumstances the collectivization of common land units (*ejidos*) has been frequently imposed. In the case of the Laguna district, for instance, if the common lands had been allotted, their well-organized development would have been destroyed, and the construction of banks and canals for the individual irrigation of each lot would have been very expensive. The area irrigated each year in the Laguna district is variable and cultivation without irrigation is impossible. Moreover, the construction of banks to divide the lots, besides being uneconomical, would have been disadvantageous because the cultivation of cotton and wheat, which has gone forward in that district with up-to-date agricultural machines, could not thrive on the small lots. Without the establishment of collective cultivation agrarian reform in this district would have brought a decrease in production, accompanied by general poverty.

The units of collective production carry out sale and purchase as well as cultivation. These units have branches of consumers' cooperation and established stores. At the end of 1941 there were 67 cooperative stores in the *ejidos* with operations in the year amounting to 1,630,000 pesos, and with 8,105 families engaged. These cooperatives are located in Los Mochis, Sin.; Lombardia y Nueva Italia, Mich, and Tapachula, Chis. In Mexicali, B. C. there was a strong group of cooperatives three years ago, but they have disappeared.

Under the present government the idea at first was to issue titles to the peasants of *ejidos* allotted, and agrarian certificates to the peasants in collective *ejidos*.[4] But the work of legal allotment was so huge that a new order included the idea of granting certificates immediately to all the peasants and granting titles as rapidly as that work could be done.

[3] Executive Order of 11th December 1941. Memoria 1940–41, Departamento Agrario.

[4] Circular J. D. Number 6 of 13th March, 1941. Memoria 1940–1941, Departamento Agrario.

Intensity of the Distribution

Another important feature has been the varied intensity of the land distribution from the large states to the villages. The intensity has changed during the administrations, reaching a minimum during the regime of Ortiz Rubio; it was thought that the distribution of land was completed in some ten States of the Republic and this was officially declared, in each case, by means of a Decree. Evidently, there was a determination to put a halt to the distribution of lands but during the next presidential term the decrees of the former administration were annulled as they were considered anti-revolutionary, and the degree of distribution was increased to an unusual height during the régime of President Cárdenas. The possibilities of distribution were almost exhausted. Because of that, the rate of the distribution has slackened again during the term of the present President.

A graph of the distribution shows the following facts: From 1916 to 1918 the donatory activity increased rapidly and was then kept steady until 1922, with the exception of the year 1921 in which approximately double the area of land was granted compared with any of the preceding years. From 1923 to 1936 there was an accelerated increase. This increase was maintained through 1927 and 1928; then came a greater rate of increase in 1929—higher than during any of the previous years. A decrease beginning in 1930 continued to a low point in 1933, when the figure was less than one-third of the 1929 figure. But in 1934 the numbers were trebled compared with the preceding year, and the increase continued; from 1935 to 1937 considerably more land was granted than in all the years from 1916 to 1934 (15,018,196 hectares from 1935 to 1938, against 8,257,-023 from 1916 to 1934). In the following years the distribution decreased rapidly (4,499,761 hectares from 1939 to 1941).

The rush movement of granting lands from 1935 to 1940, during the Cárdenas régime was performed hurriedly, without filling the legal requisites. Simple letters of possession were issued, with neither mapping nor technical survey, and without demarcation on the ground. Such procedures brought big difficulties to the villagers, and left to the present government the conclusion of the work.[5] On September 1, 1941 the number of *ejidos* pending demarcation was 3,848.

[5] See: Lecture of the Head of the Agrarian Department, broadcast on June 15, 1941, Memoria 1940–1941, Departamento Agrario.

At the start of the reform two tendencies struggled for predominance: The first was the restitution and donation of commonlands to the villagers and the second was the creation of an abundant small private ownership. Distribution of common land to the villages and "fractioning of latifundia" were the two methods of the agrarian movement. The idea at one time was to use mainly the second way. But the first kind of action became prodominant almost to the exclusion of the second.

Nevertheless, the "fractioning of latifundia" was used, and it is still in use in a few cases. This policy emanates from the colonization Law of 1926 (Federal) and from the local laws of Division of Large States. The latter are based on Article 27 of the Constitution, but they have not been issued by all the States of the Republic and, where they exist, they have only rarely been applied. According to both the Colonization Law and the Laws of Division of Large Estates already cited, the farms must be divided, and the lots sold on the basis of a certain number of yearly payments. In some instances the local laws do not allow this method but they establish a special kind of common lands analogous to the *ejidos* granted to the villages without payment; a local debt is established and the owners are paid in bonds.

This local legislation has brought about much confusion. In some cases the Federal laws are duplicated and in others the Law of Colonization and the Agrarian Code. On certain items these local laws contradict the Federal laws, as in the case of the Law for the Fostering of Small Ownership of the State of Veracruz, which fixes as exempt of seizure only 50 hectares for all kinds of lands, whereas that for the Agrarian Code the surface exempted is 100 hectares in irrigation land, 200 in arable lands, and more in other kinds. In cultivated land, there are the following exemptions: in irrigated land used regularly for cotton, 150 hectares, and in permanent plantations (fruit trees, cacao, cocoanut, rubber and banana), 300 hectares.

A complement to the above-cited laws is the Law of Idle Lands which provides that when the farming lands are not worked any person may make petition for their use by means of a rental payment fixed by mutual accord with the owner or, if an understanding is not possible, by the municipality. Unfortunately, there are no statistics of how this has worked out nor are there any on the application of the Laws of Colonization and Division of Large Estates.

The Law of Idle Lands, good as it may be in principle, has in practice opened the way to many abuses, under the leniency of the municipal governments.

Finally, in a few cases the Expropriation Law has been applied to agricultural property, but there are no statistics covering this action.

One of the most debated aspects of the agrarian policy has been the constant tendency of the last and present government to protect small and medium-size properties, that is, those where the area is below the limits affected by the Agrarian Code. This tendency does not correspond to any legislative changes, because the Agrarian Code considers these properties as unaffected, although certain cases of violation of the law in this respect have taken place in order to complete common land endowments. In accordance with the Article 27th of the General Constitution and the Article 80th of the present Agrarian Code, the proprietors affected by the agrarian reform laws have no legal resource against the agrarian seizure and cannot exercise judicial action. The Supreme Court has established a hands-off policy in agrarian matters. At present, there is a great deal of debate about this matter—the exceptions of the small ownerships that are illegally affected by the agrarian movement. But the Supreme Court has considered that it would be necessary to have an amendment to the Constitution giving intervention the judicial power for protecting the small ownership. Under the administrative dispositions the small owners can appeal to a special government office when they have been illegally affected. When the small owner has lost his land by a simple invasion of the *ejidatarios*, it is expected that the intruders will be forced to withdraw, with the help of public force if that is necessary.[6] When the affectation has been made under the mandate of agrarian authorities, but with violation of the law, the *ejidatarios* are not retired, because it is not their fault, and the small owner is compensated with equivalent lands in another part.

Another point of interest is concerned with livestock concessions established on March, 1937. A 25-year concession of exemption from the agrarian laws is granted to the livestock farmers up to 300 or 5,000 hectares, in accordance with the quality of the lands and pastures. The law indicates that this is not an unconditional excep-

[6] See: Circular of 11th July 1941. Memoria 1940–1941, Departamento Agrario.

tion, but temporary and revokable. The concessionaire must utilize all his lands and must give 2 percent of the livestock increase in large livestock, and 5 percent in small livestock to the *ejidos*. To date (from 1937 to November 1942) 230 livestock concessions encompassing 2,647,114 hectares have been granted.

Agricultural Credit: A Complement

The development of farm credit has been a complement of the agrarian reform. The common land owner, formerly a peon without funds for agricultural development, received the land but found himself without tools, agricultural implements, or money to produce the crops. So he was forced to borrow funds on very severe terms, either from merchants who lend money at usurious rates of interest or from the old farmers who supplied him with goods or with agricultural implements.

For this reason, and in view of the low income generally derived from agricultural operations in the country, the government of Mexico has been compelled to make agricultural credit a State function. The Government has organized two institutions, one that assists the common land owners and another that takes care of medium and small farm owners who are in a position similar to that of the common land owners.

Formerly only one institution, the National Bank of Agricultural Credit, covered these two groups, but since 1936, by means of a separation, the National Bank of Common Land Credit has been the institution for the granting of credit solely to common land owners. The National Bank of Common Land Credit was established on the second of December, 1935, with a capital of $120,000,000 (Mexican currency) and has at present (December 31, 1941) the same capital. The National Bank of Agricultural Credit has now a capital of approximately $30,000,000 (Mexican currency).

These resources are not by any means sufficient for the needs of these institutions in meeting all the demands for credit. In 1941 the total area under cultivation, with the assistance of loans by the two banks, was 1,000,000 hectares, 16 percent of the total area under cultivation in the country. The National Bank of Common Land Credit assisted in the cultivation of a total area of 900,000 hectares in the same year, which may be estimated as representing 30 percent of the total farming area of the common lands.

The lack of education among the beneficiaries of the credit, the

low rate of return on various cultivations due to the climate and conditions of the soil, and the leniency shown in collecting the money, have caused the official agricultural credit concern of Mexico to sustain steady losses. Besides the credit-granting function these institutions have another function of social character. But even if the latter could justify the high administrative expenditure, it would not justify the deficiencies in recovery of loans, unless the institution can be considered as a means to subsidize the poorest farmers. That function is not in accordance with its structure, which is like that of a private business. It may be estimated that the amount lost by the National Bank of Agricultural Credit, including the cancelled debts which are not recoverable, aggregates at present $30,000,000 (Mexican currency) without taking into consideration the losses derived from the administrative expenditure. As far as the common lands are concerned, the losses are considerably larger. An estimated 60,000,000 pesos may have very remote possibility of recovery; this includes the already cancelled debts, and does not take into consideration the losses from administrative expenditure not covered with the gross income for collection of interest. The losses sustained in the maintenance of the Common Land Banks, established in 1936 and liquidated at the end of 1930, aggregated approximately 1,000,000 pesos.

Cost of Reform

In short, although no accurate calculation has been made on the subject, it is certain that the effort to establish the official agricultural credit system of Mexico has cost the Government more than 120,000,000 pesos, from the year of 1926 to date, including the figures derived from the administrative expenditure. To this should be added the expense of the government in the allotment of the lands which may be estimated at some 111,615,000 pesos up to the year of 1942. Of this figure nearly 50 million pesos were accounted for during the last five years. To these figures, which refer to the expenditure of the Federal government, should be added the expenditure of the local governments which have always had special departments in charge of agrarian matters, as it is the function of the Governors to pass upon applications in the first instance.

A Recovering Land Policy

Concurrently with the agrarian distribution, the Mexican government has accomplished and is still accomplishing the task of irri-

gation construction which is fundamentally useful in the country where, in very large areas, the principal agricultural deficiency is caused by the scarcity of rain. At present, the National Bank of Agricultural Credit has charge of the colonization and administration of the Irrigation Districts already under exploitation, of which there are ten to date. The colonists of the Irrigation Districts are granted credits from the National Bank of Agricultural Credit.

Present Situation

Up to July, 1942, 28,252,437 hectares had been granted for definite common lands (25 percent of the total farming area of the country) out of which 6,077,203 hectares are tilled lands (irrigation and arable), or approximately 52 percent of the existing tilled lands. The number of common land owners assisted is 1,812,537—that is, 52 percent of the population engaged in agriculture. In accordance with the 1940 census, the common owners cultivated 60 percent of the lands cultivated in the whole country, and produced 61 percent in value. The common lands produced 20 percent of the value of the whole production of permanent plantations (as fruit trees, rubber, cocoanut, etc.) and the livestock of these common land owners represents 28 percent in value of the whole existing livestock. Besides, a numerous class of small and medium farmers has been created, and the latifundia is practically abolished.

Areas opened for cultivation, under irrigation, have diminished the seriousness of the traditional and periodic calamity of Mexico—poor agricultural years. With larger irrigated areas, agriculture has become less hazardous.

Some words of Interpretation

Finally, it must be affirmed that the agrarian revolution solved the problem of latifundia, but created a problem of minifundia. The Mexican government now faces the great problem of duly organizing production and of improving farming methods.

The way chosen by Mexico for the solution of the agrarian problem was not a well-planned and logically thought out procedure. Large losses of national wealth were incurred. They held the farming population for many years in uncertainty and insecurity. The agrarian reform destroyed outstanding units of farming, formed in accordance with the necessity of diversification of natural resources and containing buildings and equipment in accordance with the quantity and quality of those resources. It has formed a completely

new structure of ownership. The work of many generations was spoiled and agricultural production became in frequent instances insufficient.

The task was large, difficult, and expensive, but it is futile to criticize now the methods followed. The reform is virtually a fact; it would be impossible to turn back. In itself, the agrarian reform is a positive and progressive conquest inspired by human and well directed ideals. It suppresses absenteeism, large concentration of lands, and to a certain extent, the use of the land as a capital for speculative purposes. In the *ejido* the soil is no longer a capital resource; nor is it held for profit only. Also, to a certain extent, the reform has suppressed the exploitation of one man by another.

From a sociological standpoint the agrarian reform has created a class of numerous farmers who have an inheritance and are therefore tied to the land; these are important elements contributing to thrift and peace. Peons of the haciendas were the raw material of the revolutions. But it must be said that the agrarian reform caused the said problem of minifundia that is being solved by the enlargement of the lots and with the collective methods of farming.

Many nations of Latin America now confront problems similar to those of Mexico in 1910. They can profit by Mexico's experience.[7] By study and observation they can avoid blind imitation and avoid the pitfalls and errors that have caused trouble in Mexico. They can utilize to their great advantage the more fortunate experiences of Mexico.

[7] See: El Problema Creado por la Reforma Agraride Mexico, por Ramón Fernández, Mimeographed.

FARM TENURE UNDER THE STRAIN OF WAR

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THE war puts our institutions to an acid test. Where they block the way to full mobilization of our economy for the war effort, they must be changed; where they facilitate the mobilizing of our resources, they must be strengthened. Habits of life and thought are being reoriented toward the moral principle of humanitarian democracy of, for, and by the common people, and toward the economic principle of maximizing the use of our productive resources. The institution of land tenure does not escape this test in the present struggle.

I. *Orientation of the Problem*

Institutions are complex and living things, systems of ideas embodied in patterns of behavior, in customs and legal codes, in the material environment of people. Their vitality is a direct function of their adaptability to changes in ideas on the one side, to the exigencies of the material environment on the other. Tenure arrangements are an integral segment of the general institutional setting within which the United Nations are rallying their forces to win the war and build for a lasting peace at home and abroad. Any attempt to appraise existing tenure conditions by looking merely at lease clauses and mortgage contracts is futile; they must be appraised in the light of the general institutional framework which cuts across the bounds of occupations, group interests, regions, and even nations. We cannot hope to gain perspective in evaluating the adequacy of specific tenure arrangements without viewing them from the vantage point of the general socio-economic order.

Accepting, for the purpose of our discussion, the conception of institutions as patterns of group behavior, customs, and legal codes connecting systems of ideas with the manipulation of the material environment, what are the crucial changes in ideas and environment that are putting so many of our institutions under severe strains?

It is my impression that perhaps the most fundamental change in ideas which emerged from the depression and from the surge of fascism in Europe is the growing recognition that individual freedom and democracy require a strong rather than a weak govern-

ment, with positive functions of guiding the general course of economic activities toward the welfare of the common people. Individual initiative and free enterprise are still held in high esteem, yet no longer as sacred ends in themselves, but as a means to the end of maximum general welfare. Where individual initiative and free enterprise become predatory upon general welfare, they must be curbed and regulated; where they contribute to it they must be fostered and protected. Both phases of democratic statesmanship, the curbing and the fostering of individual initiative, require positive action by a representative government vested with stronger powers and unequivocally committed to the promotion of general welfare, which, for the duration, includes the winning of the war as the primary objective. To this change in the conception of governmental functions, many of the component facets of our major institutions are being adapted. This process of adaptation constitutes one source of strain under which our institutions are placed.

On the side of the material environment, perhaps the most important change has been the far-reaching conversion of human and capital resources from a position of redundancy to one of scarcity, a conversion which occurred almost over-night, which hit us like a shock the moment we entered the war. Our masses of unemployed shrank from over nine million in 1940 to two million at the end of 1942, and will practically disappear in 1943. Tremendous stores of grain bulging in bins and elevators, looked upon as devastating surpluses in 1940, suddenly became reassuring reserves from which we can draw in building a greatly expanded livestock industry. Manpower is becoming scarcer month by month throughout the economy, and the demand for war-essential goods from factories and farms rises sharply with our improving fortunes of war, with our expanding armies overseas, with the occupation of countries whose peoples are starving, and with millions of our own people asking to buy more and better food with their increased incomes.

Between these two changes, the necessity for positive and resolute guidance of our national economy by means of public policies, and the dire need for all-out production on the home front, the institution of farm tenure is caught. It is hampering urgent adjustments to the changed situation, to the new functions of public policy and the new demand for ever-increasing farm output, in the face of tightening capital and labor resources in agriculture.

11. *Character of Tenure Maladjustments*

Let us inquire more closely into the nature of these institutional frictions. What are the specific aspects of tenure conditions that impede all-out production in war essential foods, and reduce the effectiveness of policy measures designed to facilitate maximum output? The term "tenure" shall refer to the complex of economic, social, and institutional conditions under which farmers occupy and operate the land. It includes, in addition to landlord-tenant relations, the distribution of farm sizes, availability of manpower, credit and production facilities as far as they are *not* determined primarily by prices, and the many non-price factors which enter into the farmer's formulation of production plans and expectations. For illustrations, I shall confine myself largely to the Midwestern states where the bulk of the market supply of war-essential grains and livestock products originates.

To focus the inquiry upon the most relevant issues, the following assumptions shall be taken for granted: for the next two years (1) tenure conditions will not significantly affect the acreages or yields of the various major crops; (2) feed-livestock price ratios for hogs, dairy, and poultry products will be favorable to output expansion; (3) the aggregate supply of feed grains (including wheat) and proteins is sufficiently large to permit a substantial increase in livestock products over the 1942 level; and (4) we cannot produce too much of these three staple livestock products combined, with whatever resources we have available in agriculture, any specific production goals notwithstanding. These assumptions narrow the scope of our discussion to the question: how are tenure conditions affecting the possible output of hog, dairy and poultry products on Midwestern farms during the next two years; and how need they be changed to permit fullest utilization of human and material resources to the end of maximizing the output of these products?

Upon analysis of a wide range of pertinent facts and observations, the problem resolves itself into three basic shortcomings:

1. There are large numbers of farms, at least 60 percent of all bona-fide farms in the Midwestern region, where the available supply of manpower is greatly under-employed and inadequately utilized for want of feed, livestock equipment, technical knowledge and security of occupancy;

2. There is another substantial number of farms so poorly equipped with land, improvements, managerial skill, and market facilities that the workers living on these farms must be re-located elsewhere if their manpower is to be effectively utilized; and
3. There is still, after three years of war and one year of rapidly growing demand for food, a lack of realization among farmers, how desperate the need for all-out production is becoming. We shall see that several distinct phases of the tenure conditions are in no small measure responsible for the first two of these shortcomings.

Now, it is clearly the obligation of public policy to see to it that our resources are marshalled in a most effective manner to turn out the greatest possible volume of goods the nation needs in the war effort. Where individual initiative and private interest can be harnessed to do the job, the aim of public policy should be to so harness them; where they stand squarely in the way, they must be curbed or overridden. This principle in policy formulation implies that one group of people will be freed and given greater scope for their individual initiative and ingenuity, while certain other people will be curbed in their individual influence and made subject to more rigorous social controls.

III. *Evaluation of Tenure Policies*

How do these general considerations apply to the three shortcomings in our farm production process which an agricultural production program must strive to overcome?

1. *The under-utilization of the year-round farm labor force*, chiefly the manpower of the operator and his family members, on many farms can best be tackled by helping these farmers to secure more feed, livestock, and equipment. This could be done in many ways, but surely some ways will work better than others. Outright grants would probably lead to waste and inefficiency in the use of the additional production facilities; special war-production credit, conditional to a performance check, might stimulate initiative and put a premium on efficiency; both are examples of public policy measures.

But why is it that these farmers are not utilizing their manpower more fully on their own account? There is no simple answer to this question. But much of it can be explained by institutional lags and

frictions. The institutions most specifically involved are those of tenancy and credit, both components of the agricultural tenure complex.

(a) It has been pointed out repeatedly that the majority of *rented farms* in the Midwest are under-improved and inadequately equipped with buildings, fences, water tanks, hog and hen houses needed for efficient expansion of livestock productions. Census and survey data reveal that owner operated farms on the average produce more hogs, more cattle, and more milk per 100 acres of farm land than rented farms.[1] Several factors account for this difference: (a) Most of the tenants deliver nearly half of the feed grain produced on the farm to the landlord as rent, while owners are much more likely to feed the grain to livestock on their farms; (b) the landlord controls the investments in buildings and improvements, and since under the prevailing crop-share leases, his rent does not increase directly with the tenant's livestock production, he has little interest in taking the initiative for providing livestock facilities;[2] (c) the tenant's initiative for providing needed facilities is hampered by his insecurity of stay and the fact that he cannot put any improvements on the farm without losing all of their unexhausted value the moment his lease expires. Result: lack of livestock facilities and under-employment of the year-round labor force for a large part of the year.

These specific tenancy obstacles should be taken into account in the formulation of policies for farm output expansion. The kind of policy measure likely to be most effective is an excellent example of releasing individual initiative and freeing the farm enterprise of the tenant as a means of stimulating efficient production: give the tenant security of occupancy until one or two years after the war, and protect his investment in any improvement and equipment necessary for output expansion by granting him compensation for the unexhausted value of such improvements when he leaves the farm. This, of course, curbs the freedom of the landlord to *neglect* his function to provide for needed improvements; but it does not curb

[1] See F. A. Baker, Tenure Status and Land-Use Patterns in the Corn Belt, U.S.D.A., B.A.E., Wash. 1939 (mim.); R. Schickele, Obstacles to Agricultural Production Expansion, JOURNAL FARM ECONOMICS, Vol. XXIV, No. 2, May, 1942; R. Schickele, War-Time Adjustments in Farm Tenure, *Journ. of Land and Public Utility Econ.*, Vol. XVIII, No. 2, May, 1942.

[2] For a discussion of the effects of the dual control over durable and non-durable input factors on rented farms, see R. Schickele, Effect of Tenure Systems on Agricultural Efficiency, in the February, 1941, issue of this JOURNAL.

his freedom to provide them. It falls into a class of social control measures which stimulate individual initiative and economic freedom for a large group of people close to the production process, by curbing the retarding or repressive influence of a smaller group of people more remote from the production process. The net effect upon the economy is a wider scope of individual initiative and economic freedom. Unfortunately, many people still fail to realize the true character of this type of public policy, perhaps because they think only of the minority who is restricted, and not of the majority who is made more free.

(b) But it is not only on rented farms that livestock enterprises are under-developed and family labor is under-employed. On many *owner-operated farms*, livestock production could be expanded without additional workers if feed and facilities were available. Why are they wanting? Perhaps the most important factor responsible for this lack of feed and livestock facilities on these farms is the manner in which capital is allocated through the credit institutions. The principle of allocation is collateral security, not marginal productivity. It so happens that these two principles tend to work at cross-purposes: with increasing collateral security, marginal productivity of capital tends to decline, and vice versa. Instead of allocating capital to where it is scarce, our credit system allocates it to places where it is ample. Many an encumbered owner-operator is starved for capital. He is sinking his savings into land equity and is left dry on operating capital; yet, he could employ operating capital to great advantage. His collateral security in terms of livestock and feed is often small, and even a loan on that type of security from the viewpoint of the banker partakes of the nature of a character loan, since the security depends largely on the competence and integrity of the borrower. Any banker, however, can know relatively few farmers well enough to judge their characters, and those few are much more likely than not to be well-to-do, with easy access to credit almost regardless of their character. Result: lack of capital on farms where it is scarce and could contribute most to production expansion, and abundance of credit available to farms where no more is needed.

In addition to the production obstacle involved in the rationing of capital according to collateral securities, another obstacle is found in the multiple-purpose character and the smallness of the individual loan needed on these capital-deficient farms. Feed and

seed loans are fairly well standardized; but loans for a fence, for a hog or hen house, for remodeling a barn, are not so standardized. And they are small, a few hundred dollars or less at a time. They are costly for a banker to handle, and as long as he can make a success by dealing with a few large customers he cannot be expected to bother serving many small ones.

These specific credit obstacles should be recognized in an agricultural production program. Again, the type of policy measure likely to be most effective is of the expansive rather than restrictive kind: arrange for special war-production credit to be granted for getting certain livestock facilities onto farms where they can be used effectively with the existing labor force, and for getting certain well-tested production practices adopted, such as feeding sufficient protein supplements, raising hogs on clean ground, etc. Such small loans might well be looked upon as a device for overcoming inertia and lack of knowledge on the part of farmers as much as for supplying them with needed capital. To be effective on tenant as well as on owner farms these credit arrangements need to be supplemented with provisions for the tenant's security of stay and improvement compensation discussed above.

A policy of small war-production loans would stimulate individual initiative and expand economic freedom for many farmers; it would not curb the freedom of bankers in any real sense. In fact the possibility of securing the cooperation of small town bankers, by having the government underwrite these loans and carry part of their service costs, may prove to be quite strong. Whatever agencies are to administer such loans, the principal objective should be the providing of under-employed farmers with more capital to expand their output.

(c) Here, a word needs to be said regarding the *potential managerial ability* of capital-deficient farmers. It is often contended that the operators on these smaller farms with excess labor capacity are inferior in management ability and would fail to make efficient use of any additional assets which might be furnished them. This contention is based upon the erroneous conception that the managerial capacity of a given farmer is a fixed unalterable quantity inherently predetermined by his mental make-up, and that he is at any given time utilizing this "management quantity" fully to the limits of his capacity. Of course, nothing could be further from the truth. The experiences of most borrowers of the Farm Security

Administration, of many now prosperous and efficient farmers, who at some stage of their life labored under great handicaps of capital deficiency and lack of opportunities, and the observations of psychologists and educators—all bear irrefutable testimony against this conception. Managerial functions are highly complex. The individual's capacities for the various functions are malleable within rather wide limits and are strongly influenced by environmental conditions, by tradition and prevailing attitudes, by the presence or absence of specific incentives for doing specific things. In wartime, environmental conditions can be radically changed, and specific incentives can be provided quickly and forcefully. There is ample evidence that a large proportion of farmers can be expected to respond to financial and managerial assistance in expanding livestock production.

2. *Relocation of farm families* from over-populated areas to labor-deficient areas may in many cases be the only possible way to put their manpower to productive use. The supplementation of surplus labor with capital resources is often rendered unfeasible by poor market location, very small and poorly equipped farms on poor land, "submarginal" operators lacking a minimum requirement of skill and self-discipline in management, and stubborn institutional conditions such as share-cropper arrangements, great insecurity of tenure, etc. Where these conditions apply, the surplus labor should be shifted to where it can supplement existing capital, land and managerial resources. In the poorer sections of the Midwest, in the cut-over region and the southern fringe of the Corn Belt, perhaps 60 to 70,000 families could be found within the next year or two who would greatly improve their economic position by such a shift, and at the same time contribute much more to the war effort.

If a government agency undertakes a program of relocating farm families, it assumes a great burden of responsibility. Selective recruiting and controlling the conditions of employment of the farm families, particularly as to wages, housing and job tenure, constitute the crucial phases of such a program. Provisions for short training courses and medical treatment, and for defraying all or part of the transportation costs could contribute a great deal to widening the scope and insuring the success of the program.

Such a policy involves drastic changes in the tenure situation of the families concerned, and may even affect the tenure pattern of both the locality from which they come and the one to which they

go. The major tenure aspects which a program for relocating for families must take into account are these:

(a) Many families on submarginal farms who could contribute more elsewhere hesitate to move because of the insecurity of their prospective employment. Even if they are offered a definite job opportunity in a specific farm or factory, they fear they might lose the job after the war. Although undesirable from a long-time viewpoint, it might be justifiable, for the sake of overcoming the resistance to move, to keep the possibility of retreating back to the place open to the family. If some reasonable guarantee of continuous employment for a period of three or four years could be given, this inducement to move would be much preferable. Apart from these economic considerations, there exists of course a strong feeling of attachment to the farm, landscape and community among some families, which although perhaps not consciously realized, still constitutes a most potent source of resistance to moving.

(b) The issue of social status is bound to arise in many instances. To many a farmer, the change from an operator to a hired man is difficult to bear even if his income were doubled by it. Several observations suggest that a farmer may often prefer to become a worker in a factory and live in the city, rather than to become a hired hand on another farm; the first means a change in occupation, the second a loss of social status. This reaction is particularly likely to occur in the minds of owner-operators. This source of resistance to relocation might partly be overcome by arranging for adequate housing, good wages and respectful treatment of the family on the farm where they are to be employed. Another possibility, of course, is to relocate the farmer as a renter or even prospective owner on a larger and better equipped farm, provided the farmer is qualified to manage it. Numerically, however, the placement possibilities of farmers from poor under-sized to better and larger farms during the war period seem very limited.

(c) The liquidation of submarginal farm units from which operators are to be moved requires specific attention in a relocation program for two reasons: (1) to eliminate the resistance to moving of otherwise suitable migrants, because of the losses they might suffer in the process of liquidating their holdings, equipment, and other assets, and (2) to assure that land and improvements continue to be utilized productively, by combining them with neighboring farms into more efficient producing units. Such a disposal of the

evacuated farms has also the advantage of discouraging the backflow of families into these rural slum areas during a possible postwar recession. To accomplish this two-fold objective, a fund will be required; but this form of financial assistance should definitely be of a self-liquidating nature.

These two policy measures, providing under-employed farm families with feed and livestock facilities for output expansion, and relocating families out of overpopulated and poor farming areas onto better land, could not only contribute significantly to agriculture's war effort, but would bring about highly desirable adjustments in tenure conditions in the longer run.

The third shortcoming in the agricultural production process, a rather far-reaching lack of realization among farmers of the desperate need for all-out production efforts, has no roots in specific tenure conditions; nor is it limited to farmers. It has, however, one important bearing on the tenure situation: the faster and wider this realization spreads the more obvious will the tenure obstacles to output expansion become, and the greater will be the pressure for removing or overcoming them. To some extent, they can be overrun by extremely high price incentives and subsidies; but they cannot be removed by these measures alone. It is the function of judicious policy making to decide, where there is a choice, in favor of measures resulting in basic adjustments desirable in the long as well as the short run, rather than in favor of stop-gap measures which often turn out to be unduly costly or relatively ineffective or both.

The war emergency affords rare opportunities for accomplishing long overdue adjustments in our economic and institutional arrangements, because of the urgency for the maximum performance of the national economy and the resulting stresses and strains under which many of our institutions are placed. The extent to which we neglect to seize upon these opportunities measures the failure of people to marshal their forces for a vital common cause, and the failure of democratic statesmanship to make judicious decisions in the interest of victory and the general welfare.

ORGANIZATION AND OBJECTIVES OF THE REGIONAL LAND TENURE RESEARCH PROJECT

HAROLD HOFFSOMMER[1]
Regional Land Tenure Research Project

Introduction

SOCIAL scientists have long discussed the feasibility of a regional approach to the study of economic and social problems but they have not as yet decisively advanced from the area of discussion to that of action. The Regional Project is an attempt to achieve this advance. It is true that valuable techniques have been developed for delineating regions and analyzing their contents but little has been accomplished in bringing the social scientists of a given region together in such a way as to pool their interests and efforts on their common problems.

The Mississippi Delta, for example, extends into the three states of Louisiana, Mississippi and Arkansas, yet the research personnel in these states has had little opportunity and incentive to devise a consistent and unified attack on the common problems of this area. The illustration simply points to the need, in the present era of expanding functions and interests, of a wider collaboration and a more effective method for the pooling of effort than now exists in research organization. The rice area, extending over state lines in southern Louisiana and Texas with counterparts in Arkansas, the semi-arid Low Plains in southwestern Oklahoma and Texas, the Cross Timbers area in north central Texas and Oklahoma, the Ozark-Ouachita area of the west central Arkansas and Oklahoma and the Gulf Coast area in Louisiana and Mississippi are illustrative of the same need in the region under consideration.

The Regional Land Tenure Research Project hopes to bring the research personnel of the five states of Arkansas, Oklahoma, Texas, Mississippi and Louisiana into an effective working relation centering upon the subject of land tenure. It is set up for a period of three

[1] Director of the Project on leave from Louisiana State University. The Project was initiated and is being carried on under the auspices of the Southwestern Land Tenure Research Committee whose membership is as follows: C. O. Brannen, University of Arkansas, Chairman; Joseph Ackerman, Farm Foundation, Chicago, Executive Secretary; O. D. Duncan, Oklahoma Agricultural and Mechanical College; Lippert Ellis, Bureau of Agricultural Economics, Little Rock; B. M. Gile, Louisiana State University; L. P. Gabbard, Texas Agricultural and Mechanical College; Peter Nelson, Oklahoma Agricultural and Mechanical College and Frank Welch, Mississippi State College.

years. Since the project is still young this report is a statement of plans and goals rather than of findings either with respect to subject matter or organizational set-up. Evaluation of procedures and statements of findings will come at a later date.

History of the Project

An adequate history of the Project cannot be set forth within the span of this brief report. Although its development has had its greatest growth in meetings held in 1941–1942, its roots go back a number of years to meetings of the Southwestern Social Science Association and the "Outlook" meetings held in Texarkana. The committee personnel in at least three of the cooperating states has been constant over a period of years and although their group interests have not been consistently that of land tenure they have formed the nucleus of a working relationship through long personal and professional acquaintance which is basic to an understanding of the present project growth.

One of the earlier conferences which contributed directly to the formulation of the present Project was sponsored by the Farm Foundation and held in Texarkana[2] in December, 1939.

Two other groups, the Outlook Conference and the cooperators on the Bureau of Agricultural Economics Tenure Area Study were meeting in Texarkana the same week. As a result of this arrangement of meetings nearly all of those in the area professionally interested in tenure study were brought together during this week.

A follow-up of this meeting was called at Dallas in March, 1940 for the general purpose of coordinating the tenure work in the Southwestern states. This meeting was composed of the heads of the departments of Agricultural Economics in the states of Arkansas, Texas, Oklahoma and Louisiana. The Southwestern Land Tenure Research Committee was formally organized at this time and decided on the broad subject matter approach of associating "performance" with type of tenure.

However long the regional idea had been harbored in the minds of individual members of the committee an important advancement on the regional front as a forerunner to the present study came at a meeting in St. Louis in February, 1941.[3] This nation-wide meeting

[2] Conference on Land Tenure West South Central States; Farm Foundation, Chicago, Illinois, 1939, 67 pp. (mimeographed).

[3] Mississippi was given formal representation on the Committee at this time. The designation Southwestern Land Tenure Research Committee is obviously not ap-

sponsored by the Farm Foundation and the Bureau of Agricultural Economics through the North Central Regional Land Tenure Committee and the Southwestern Land Tenure Research Committee included, among others, representatives from those states cooperating with the Bureau of Agricultural Economics Tenure Area Study. As the meeting progressed its members divided into sections representative of areas for the purpose of discussing the development of coordinate lines of tenure research within the several areas. The Southern group centered on two lines of approach (1) tenure change, (2) the impact of government programs on tenure. No conclusive decisions were reached. However, following this meeting a small group representative of the Southwestern states met and formulated a general plan for that area.

From this time on the Committee became quite active in the formulation of its program. In August, 1941, it met in Little Rock at which time the membership was broadened to include a rural sociologist from each of the two Experiment Stations in the area having such departments, also a representative from the Regional Office of the Bureau of Agricultural Economics. The Committee Chairman took the initiative in rounding up all state tenure materials including publications, lists of unpublished data and plans for future tenure work. Against this background the Committee members together with the Chairman worked out proposed budgets and procedures of work for their individual states. These plans were then combined and approved by the Committee as a whole with the view of making a regional tenure study aided by funds from the Foundations.

In January, 1942, the Committee again met in St. Louis with representatives of both the General Education Board and Farm Foundation in attendance to give the proposed project a hearing. Subsequently a meeting for further refinement of plans and procedures were held in Little Rock. Following the granting of funds by the Foundations the Committee met in Fayetteville and continues to have meetings at convenient points from time to time as

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propriate for the Mississippi member, since Mississippi is not a southwestern state. But for want of a more descriptive title the original Committee name is retained. It should also be observed in this connection that the five states do not accurately constitute a region in the sense described by Howard W. Odum in his *Southern Regions*. They constitute several regions. The Regional Project, however, concentrates on sub-regions or areas within the region. The fact that the Upper Mississippi delta, for example, lacks homogeneity with West Texas, is recognized and the data are to be treated accordingly.

the study progresses. Since the Committee is the final arbiter in all matters concerning the Project the agenda of these meetings cover a wide scope including budgetary matters, personnel and the general subject matter content of the Project.

Concurrent with, and also as a part of, the above development were two other meetings involving some of the same personnel as those already mentioned. The first was at the Lookout Mountain Hotel, Chattanooga, Tenn. in June, 1939, and the other at the Edgewater Gulf Hotel, Gulfport, Miss., in April, 1941.[4] The general thought running through these meetings was that of unifying southern agricultural economics research. Since cotton is a dominant southern crop the feasibility of making a complete study of that crop, including its international implications, was considered. The study was abandoned largely because it was too broad and could not possibly be handled by the disciplines involved. Also the general plan for study as presented at the second meeting lacked appeal to those agencies which might have aided with funds since it involved bringing in outsiders to do the work rather than developing responsibility in the members of the state institutions. This is significant in that it points out a principle to which the Regional Project adheres, that is, that the members of the departments in the several states are studying their own problems, and meeting their own situations and are not in the position of being studied by someone from the outside. The Regional Project has headquarters in one state in the region but all of the other states are exactly as much a part of the Project as the state in which the Project headquarters happens to be. This is in contrast to the usual conception of the regional research institute which is centered in one state and studies a region.

Present Organization

The present organization of the Project is as yet somewhat tentative, that is, it is constantly being scrutinized for its efficiency in the attainment of its two main objectives: (1) a study of land tenures in the five-state region, (2) a plan for regional research cooperation. These two objectives are closely allied. That is to say, a regional

[4] These conferences were sponsored by the General Education Board. Proceedings of both conferences were issued in mimeographed form by the Executive Committee under the following titles: (1) The Place Which Agricultural Economics Should Occupy in a Program of Development for the South, (2) Research Development and Possibilities in Agricultural Economics in the South.

contribution in its subject matter phase is dependent to a considerable extent on an effective regional organization. Likewise, regional cooperation cannot operate in a vacuum. If a real plan is to be developed it must be worked out on the basis of a real subject matter problem, not a hypothetical one. Conferences to develop the spirt of cooperation and to integrate various phases of subject matter materials are fine so far as they go but if their force is expended in talk, memoranda and conference notes and they do not result in definite and specific action, then the influence of the conference has not gone beyond the four walls of the hotel in which it was held, excepting to disrupt the work of the state representatives who attended it.

Financing

The Regional Project is financed by a grant of $150,000.00 from the General Education Board and a somewhat smaller amount from the Farm Foundation. In order to secure these grants and to carry on the proposed cooperative activities of the Project each of the five states pledged varying amounts of personnel and travel funds according to the activities contemplated. In addition to this, the Bureau of Agricultural Economics, since it was already cooperating on tenure projects in all of the states, budgeted a sizeable amount for cooperation with the Project. In all, the assets of the Project for the three-year period of its duration amount to somewhat over $350,000.00. Before these funds were granted the Farm Foundation greatly aided in the formation of the project proposal both by financing meetings and by giving the support of its own personnel.

Location

After the funds were granted one of the first problems faced by the Committee concerned the location of the Regional Headquarters. Chief considerations were suitable geographic location, availability of adequate physical plant and establishment of business relations for handling the funds. Early in the Committee discussions it was decided that it would be most satisfactory to have one or the other of the cooperating institutions handle the funds thus avoiding incorporation of the committee or paying fees to an outside agency for disbursement of the funds. After assessing the situations in the several states the University of Arkansas was designated as the disbursing agency.[5] The Committee felt that,

[5] The Project pays the University a nominal fee for this service.

although not mandatory, it was desirable that the physical headquarters be at the same place as the disbursing agency. Since the University of Arkansas was able and willing to make the larger part of a building available to the Project it was decided that the headquarters should be located at Fayetteville. The demand for central location with good transportation facilities could not be met entirely satisfactorily by any of the five Experiment Stations in the region.

Regional Office Organization

Having chosen the regional headquarters a next important step was that of choosing a regional director and regional staff. The director was chosen from among the Regional Committee. He was then given considerable responsibility in developing a regional staff.

Those on the payroll of the regional office may be divided into four groups: (1) Director and central regional staff. In addition to the director the central staff consists of a statistician, a subject matter specialist in each of the fields of land economics, farm management and rural sociology, one person assigned to the project by the Division of Land Economics, Bureau of Agricultural Economics and the clerical and statistical personnel. (2) Field Survey personnel. These are men holding master's or higher degrees who work in the various states as the need arises. The Project has four such men at present. (3) Regional State Employees. These are men assigned to work in a given state for a period of six months or more. There are five such men at present. They are appointed by the Director on the recommendation of the state in question. (4) Temporary Field Workers. These workers are appointed by the Director usually on the recommendation of the state needing the worker. The number of these employees has varied from time to time. At the present eleven such workers are employed.

Organization within the States

The intent of the Project is to facilitate and amplify the work within the individual state experiment stations and at the same time to develop a pooling of effort which will result in a regional product. It cannot be too strongly emphasized that the regional product is dependent mainly on the work done in the states.

The members of the Regional Committee who sponsor the project are department heads of Agricultural Economics and Rural Sociology in the Experiment Stations of the five states together with the Regional Research Supervisor from the regional office of the Division of Land Economics, Bureau of Agricultural Economics. The state committee member heads up the work in his state, handling the division of labor as he sees fit. He is the project leader unless he turns over this function to another. The states vary in organization at this point from that of where the head of the department and committee member is entirely responsible for the detailed conduct of the project within his state to the arrangement whereby essentially the whole collaboration on the project is turned over to a member of the department.

Relation of Regional Employees to States

The relation of regional employees to the state project leaders may best be seen by giving as an example the so-called "intensive" survey which is a basic phase of the project. The schedule for this part of the study was developed by a schedule committee from the five states with the collaboration of the regional staff. It was then finally revised and approved by the regional committee. This schedule was then to be used in each of the five states in areas which had been previously selected by the committee as representative of the region.

The regional office, in consultation with the states, worked out instructions for this schedule. The individual states then took the schedule and adapted it to their particular needs both with respect to dividing it for interviewing purposes and adding subject matter material. The committee stipulated, however, (1) that all information called for on the regional schedule should be taken, (2) that the state material which might be added would not be such as to impede materially the progress of taking the regional schedules, (3) following the collection of the regional schedule data, that they should be transcribed in the state to a printed regional schedule form and sent to the regional office for processing.

The committee determined that any regional employee while working in a given state was to be under the direct supervision of the project leader in the state in which he was working. The state project leader therefore was to be held responsible for the accurate collection of the intensive survey data within his state. Although

collaboration between the regional office and regional and state employees was to be close it was understood that the regional office would not enter into the management of the collection of these data except in an advisory way. In this way states' rights were to be preserved. Regional employees, therefore, were to have the same status as department members within the states. Actually, of course, the regional employees are in a position, having worked on the same material in several states, to enrich particular state observations on the basis of their wider experience. It should be added that where possible, men who are assigned to a given state are shifted to other states as the occasion warrants so as to broaden their experiences.

Relation of Regional Office to Disbursing Agency

A highly important phase of the project planning was to secure a situation in which the project could disburse its funds unfettered and in accordance with the will of the committee. To this end the chairman of the committee took the responsibility of making these arrangements with the University of Arkansas at which institution he is an official in the School of Agriculture. In the business affairs of the project the chairman of the committee countersigns project payrolls and requisitions after they leave the office of the project director and before they go to the University Business Office.

Subject Matter Background

The foregoing constitutes a brief statement of the organizational means by which the study of land tenure is to be carried on in the region. As a preface to a more specific statement of the subject matter objectives it should be pointed out that the present study differs from most other tenure studies in two respects: (1) it is regional in scope, (2) it combines the subject matter fields of land economics, farm management, and rural sociology.

As already intimated the five state region has been broken down into areas based largely on geographic conditions. No particular emphasis was placed on the exact physical delineation of these areas except that they were utilized as the basis of sampling for the intensive phase of the survey. That is to say, the sampling was done on an area rather than a state basis. Putting the total sample together should give a picture of the area as a whole. By the same token the sample in a given state is not intended to be such as to

cover the various areas represented in that state. It should be reiterated that the areas referred to are largely geographic in nature. They are not necessarily "tenure" areas. To discover the relation between tenures and these geographic areas is one of the objectives of the Project.

Closely allied with the regional approach is that of the multiple subject matter approach. The Committee feels that in the past one of the distinct limitations of tenure studies has been the practice of the several subject matter fields to make studies without much regard for the findings of complementary social disciplines. Although carefully made many of these studies have not answered the practical questions that people have wanted to know. It is impossible to study effectively land tenure through a narrow subject matter approach. The minimum subject matter of tenure involves the relationships between the land, the people and their institutions —and this covers a wide territory. It is relatively ineffective, for example, to study meticulously living levels without reference to farm organization and management on the one hand and economic and social institutions on the other. The aim of the Project is to address itself to certain problems which appear to be related to the tenure situation. The emphasis is on the problem regardless of the subject matter approach or the techniques involved in its solution. The answer may demand the techniques of more than the three subject matter fields of land economics, farm management and rural sociology but at least the Project will exhaust the possibilities of the techniques developed in these three disciplines before turning to others. It will also demand that the answers given be the combined answers of all disciplines used and not those which might tend to over-emphasize one or the other.

It is the assumption that the practical problems of this multiple approach can better be met on a regional basis than in an individual institution. This accrues partly from the fact that the region is sufficiently large to embrace a number of specialists in the subject matter fields in question. The cross fertilization of ideas and approaches that may result from uniting these techniques in an effort to answer some of the persistent problems of tenure may well be highly constructive.

State Products

In addition to the regional issue of the project it is contemplated that each of the states will prepare a series of bulletins from the data

collected. This is facilitated by the intensive phase of the survey in that each of the states has added certain variations to the basic regional schedule. The same development is likewise feasible on other phases of the project since the state and local interests in even the same data may be quite different than that of the region.

The state studies will vary greatly in nature and content. They need not all be specifically on the subject of tenure. In many instances the regional data may be complemented in such a way as to make it of definite use for those whose major interests do not specifically include tenure. This type of marginal tenure research furnishes valuable supporting material for the state and regional products. Another type of state effort which the project encourages is that of interesting graduate students in utilizing sections of the data for master's and doctor's theses. This really serves three purposes in that it helps the student by affording materials for his thesis; it adds to the state and regional subject matter; and at the same time tends to create a wider interest in the study of tenure.

Arrangements are being made for duplication of the punch card and other data in case both the state and regional offices need it at the same time. Considerable planning and care is necessary at this point, however, to avoid duplicate work. It is the hope that the various sections of the study can be worked out in sufficiently close collaboration so that every part of the regional and state work will constitute a supporting and integrating effort for every other part. In this way the regional and state products are not separate and apart from one another but constitute a united effort of the personnel of the region toward the study of their common tenure problems.

General Plan of Study

The present plan of study procedure may be briefly stated as follows: I. The Intensive Field Survey, (a) Farm and Family survey, (b) Institutional and Community survey; II. "Follow-up" surveys; III. Tenure Impacts of the Farm Security Administration; IV. Tenure Impacts of the Agricultural Adjustment Administration Soil Conservation Service and other governmental organizations; V. Tenure Experiments. Although these items obviously overlap, the statement gives some idea as to the study emphasis.

Field Survey

The intensive survey is being carried on so as to combine the several subject matter fields. The field work is divided into two

parts: (1) Farm and Family survey, (2) Institutional and Community survey. The data from the Farm and Family schedules are presumed to give a cross section of all tenures found in the area. The material in the schedule covers the range of the farm household's economic and social activities, in fact everything about them within the subject matter fields that is presumed to be directly related to tenure.

Sampling

The sampling in the states varies somewhat but certain general guides were issued by the regional office to assist in achieving comparable materials.

Among other things it was pointed out that the project is concerned primarily with a study of relationships rather than with a description of the universe. Moreover, because of securing certain types of data from families associated with one another in the same community, it would seem advisable to use some form of block sampling.

Accordingly it was suggested that the sampling procedure might be somewhat as follows: Each area to be sampled should be studied in detail with the use of data available from the census and other sources. On the basis of this over-all analysis, a number of blocks in each area might be selected for study. These blocks should be selected in such a way as to secure for a given area a wide variation in the variables to be related and a limitation in the variation in factors to be controlled. For example, assuming an interest in the relation of tenure status to social participation, data should be secured from different tenure groups in areas with widely varying proportions of the different tenure groups and with limited differences in factors which are to be held constant such as type of farming and color of population.

The procedure, after the blocks have been selected, would be to secure as complete an enumeration as possible, with one exception of the cases within the boundaries of these blocks. The exception refers to situations in which a number of laborers or croppers on one farm have the same tenure relation to the operator of that farm. Since there would seem to be no point in taking a schedule from each such laborer or cropper a few cases taken more or less at random would be enumerated.

After the cases in the sample blocks have been enumerated, a tabulation of the schedules according to major factors such as

tenure status may very well suggest the desirability of increasing the number of cases in certain categories. This can be done by adding to the sample described above, the desired type and number of cases, taken from the area secured by extending the boundaries of the block.

The second phase of the intensive survey deals with the institutional and community aspects of the areas in which the farm and family schedules are taken. This concerns the educational, social, religious, economic, governmental and other institutions in the areas as well as the group organizations of various kinds which relate to tenure. The emphasis in this phase of the study is not upon the institution as such but upon its impact on tenure.

The second broad phase of the study has been commonly referred to as the "follow-up" studies. In several of the states tenure surveys made several years ago would furnish valuable regional and state information if brought up to date. This work involves resurveying as well as revising old studies on the basis of new census and other information.

The third broad phase of the study, Tenure Impacts of the Farm Security Administration, is an obvious and necessary phase of any comprehensive tenure study at this time. Social scientists have long bemoaned their inability to apply laboratory methods to their subject matter. Now they have a rich field for tenure study which should yield valuable results. The Administration itself is facilitating this phase of the study by making records available and by assisting with interpretations and giving aid in getting additional information concerning the clients on its various programs. One phase of this study will be a tenure comparison, in terms of the intensive survey, between the FSA clients and those not included in the program.

The fourth phase of the study, the Tenure Impacts of the AAA, is also obviously one of broad significance the details of the approach of which are not as yet formulated. Likewise, the fourth phase, dealing with tenure experiments here and abroad and their relation to the region in question belongs to a later part of the study.

Objectives of Tenure Study

In brief compass, the objective of the project is to relate land tenure status to farm family economic and social performance. In attaining this objective a fundamental problem is that of deter-

mining the criteria for classifying tenures into meaningful categories. To generalize, for example, on the performance of "owners" without knowing the kind of owners may be largely meaningless. Likewise generalization on tenant groups based on the amount or type of rent they pay may be equally futile. Once the connection between tenure status and performance is made clear it will be possible to select the type of tenures which will aid in achieving the desired goals—whatever they may be—for farm life.

Hypothesis

Stated in terms of hypothesis the assumptions are that land tenure is a fundamental issue in determining:

(1) levels of income for farm families
(2) distribution of farm income
(3) opportunity for raising economic status of farm families
(4) levels of social development
(5) opportunities for development of social status
(6) land resource utilization
(7) levels of production
(8) levels of health and nutrition

To these may be added several more as the study progresses. A brief perusal of these items will show that they encompass many of the persistent problems of rural life. Assuming an interest in rural welfare, the question is "What kind of land tenure or tenures do we need to help solve these difficulties?" Obviously neither the recommended tenures nor the solutions can be attained over night but properly linking tenures and their results should be a step in the right direction.

WORK AND PLANS OF THE NORTH CENTRAL REGIONAL LAND TENURE COMMITTEE

H. C. M. Case
University of Illinois

THE depression of the early 'thirties with its aftermath of farm debt distress, farm mortgage foreclosures, farms held by unwilling owners, the increase in farm tenancy, and the instability of farm occupancy, focused more attention on land tenure problems than in any previous period of our history. Evidences of this interest are found in the President's committee report on farm tenancy in 1937 and the appointment of a number of state farm tenancy commissions. These and other indications of a rapidly growing interest in land tenure problems prompted the holding of an informal land tenure conference for the north central states at Davenport, Iowa, in the spring of 1939. At this conference there was common ground of agreement that land tenure problems varied so widely from region to region that it is misleading and dangerous to generalize from data applicable to one area in stating problems or conditions over too extended an area.

The experience in other countries, including practically all of the European countries, demonstrates that land tenure problems are of great significance in the entire economic structure of nations. In spite of the experience of these countries, however, no policy is so outstanding as to indicate its application to the problems in this country. It was evident to the group in the first conference that there was much to be gained through group discussion within those areas that have many similarities. With this background of agreement, the conference formulated tentative objectives which included:[1]

1. To cooperate with the states in the coordination and development of their land tenure research programs.
2. To cooperate in the coordination and development of educational programs designed to promulgate a fuller understanding of land tenure problems.
3. To serve as a clearing house for research and extension activities relating to land tenure.
4. To call conferences, both for the Corn Belt as a whole and for subdivisions of the region.

The initial and subsequent conferences have provided an oppor-

[1] See Journal of Farm Economics, Vol. XXII, No. 3, August 1940.

tunity for the interchange of points of view and have stimulated research action in a number of the states. The record and bibliography of new projects, theses, bulletins, and articles that have been prepared for the cooperating states denotes a wide and continued interest in land tenure. In several states the program has probably moved forward little affected by the coordinated effort; while in others the specific pieces of research and the theses reflect the regional discussions. The discussion in the conferences has shown areas of incomplete information, a condition which has, as I can personally testify for my own state, led to specific studies or phases of projects designed to obtain data needed to clarify some areas of misinformation or inadequate information.

Many public statements on different aspects of land tenure have assumed that problems were quite similar for wide areas, and even for the entire country. The conference discussions, however, in recognizing the regional character of many of the problems served to emphasize the importance of studying the problems in localized comparable areas with a view to providing factual information which would be a guide in the development of policies adapted to existing conditions leading to better land tenure conditions.

After the work of the north central states had proceeded on an informal basis for about two years, the temporary committee[2] in conference with Farm Foundation officials decided to propose to the North Central Experiment Station Directors that they recognize the committee as an official regional experiment station committee. As a result duly accredited committee members representing the 12 north central states met at St. Louis, March 1, 1941 and organized on a more formal basis with H. C. M. Case, Chairman, and Joseph Ackerman as Secretary.[3]

The agenda for this conference included the formal organization of the North Central Regional Land Tenure Committee, the discussion of the type-of-tenancy area study which had been undertaken by four states in the north central region and four southern states, and the development of an outline for future research. Rep-

[2] Temporary committee consisted of T. W. Schultz, Iowa; G. S. Wehrwein, Wisconsin; H. C. M. Case, Chairman, Illinois, and Joseph Ackerman, Executive Secretary, Farm Foundation.

[3] The present members of the regional committee designated by their respective experiment station directors were: H. C. M. Case, Illinois; O. G. Lloyd, Indiana; Rainer Schickele, Iowa; Harold Howe, Kansas; E. B. Hill, Michigan; G. A Pond, Minnesota; O. R. Johnson, Missouri; H. C. Filley, Nebraska; C. E. Miller, North Dakota; J. I. Falconer, Ohio; Gabriel Lundy, South Dakota; G. S. Wehrwein, Wisconsin.

resentatives from 26 states interested in land tenure, representing mainly the north central and southern regions and representatives of the Bureau of Agricultural Economics attended the conference. The representatives of the states at the conference were divided into four groups—north central, southeastern, southwestern, and great plains—for the development of an outline of rural land tenure problems pertaining to their respective sections of the country. The outline prepared by the north central regional committee is reproduced here as follows:

Outline of Rural Land Tenure Problems

1. General reconnaissance survey
2. Analysis of land ownership
   - A. Size of units
   - B. Types of farming
   - C. Age and sex of owner
   - D. Problems of succession
   - E. Problems of productivity of the land
   - F. Residence
   - G. Occupation and farming experience of owner
   - H. Indebtedness
   - I. Type of lease contract
   - J. Relation of ownership to method of conservation
   - K. Inheritance
   - L. Reasons for land ownership
   - M. Small equity buyers
3. Analysis of type of operatorship
   - A. Part ownership
   - B. Owner operatorship
   - C. Hired labor operation
   - D. Tenant
   - E. Hired manager
   - F. Corporative and cooperative control of land
   - G. Scale of operation (family-size, corporate size, etc.)
4. Methods of acquiring land ownership
   - A. Inheritance
   - B. Manner of payment for land
5. Historical development of present land ownership pattern
   - A. How we got the relationship we now have
   - B. Case studies of tenure history of individual farms as well as individual operators or owners
6. Interpretation of trends in the size of farms

7. Legal aspects relating to rural land tenure
8. Landlord-tenant working relationships
   A. Lease arrangements and forms
   B. Methods of rent determination
   C. Legal aspects of landlord-tenant relationships
   D. Security of tenure
   E. Problems of compensating tenants for labor and for capital improvements
   F. Equity
   G. Problems of compensating landlords for depletion of productive facilities
   H. Quality of farming
9. tenure problems growing out of credit relationships for both owner and tenant
   A. Facilities for tenants
10. Effect of tenure forms upon land use, conservation, and intensity of farming
11. Adaptability and application of leasing agreements and specific lease provisions
12. Supply and demand situation in the rental market
   A. Impact of shifts in price levels on landlord-tenant relationships
   B. Relative opportunities
   C. Effect of alternative opportunities
13. Problems of public ownership and management of agricultural land
14. Problems of adjustment of tenure arrangements to changes in the factor supply-demand situation
15. Analysis of the agricultural ladder
   A. Fitness of tenants to become land owners
   B. Analysis of capacity of individuals
16. Qualifications of successful farm operators
   A. Capacity of individual to become a successful operator
   B. Fitness of prospective tenant to become farm manager and farm operator
17. Relationship between land tenure and government programs

While members were requested to arrange the problems in order of their importance or to add additional suggestions, the response in general was one of approval of the outlined problems. Different states selected different problems to become the basis of early state studies, depending upon local conditions. Quite general support was

given to the assembling of data pertaining to a general reconnaissance survey, the analysis of land ownership and the analysis of the type of operatorship.

A subcommittee consisting of J. I. Falconer, Ohio, Chairman, O. G. Lloyd, Indiana, and Frank Miller, Nebraska, was appointed at the same conference to reconsider the objectives of the North Central Regional Land Tenure Committee and presented the following report which was unanimously accepted.

"The objective of this committee is the development of an integrated long-time program of research relating to land tenure in the north central states.

This is to be facilitated through:

1. Establishment of contacts between research workers in the various states, so that everyone may be well informed regarding the tenure work in progress throughout the region, the various problems under study, the methods employed, and the results obtained.
2. Periodic review and critical appraisal of the studies completed, in progress, or about to be initiated in the region.
3. Recommendations as to projects that might be undertaken on a regional or a state basis.
4. Cooperation with the Farm Foundation, the United States Department of Agriculture, and other agencies interested in land tenure problems.
5. Meeting of the committee once a year in full session to review work that has been completed, to criticize studies that are in progress, and to offer suggestions as to new projects that might be initiated in the region.
6. Consideration given to the publishing of reports of research of interest to the region."

A second meeting of the full committee was held at Des Moines on February 22, 1942. The emergency effect of the war upon the research work in agricultural economics came prominently into consideration, with the recognition that much of the current research work would be adjusted to wartime needs, and that insofar as possible research already conducted would need to be used as a basis for meeting current problems. The committee accepted the following points as pertinent considerations in developing a wartime land tenure program:

"1. Emphasis should be given to the development of father-son farm partnerships.

2. Emphasis should be given through the extension service to encouraging landlords and tenants to adopt leasing terms which will enable them to expand their output.
3. Satisfactory lease forms should be developed where the landlord will furnish all of the improvements and equipment.
4. Emphasis needs to be given to tenure problems related to wartime production.
5. An outline should be prepared of a plan which will enable people to make the necessary adjustments when they return from industrial to agricultural employment.
6. Emphasis needs to be given to the desirability of using some of the increased earnings to reduce indebtedness and to build a reserve which can be used during the post-war period.
7. Immediate attention should be given to the problem of adjusting people that are now on poor land and people who are poor farmers into alternative occupations where they can contribute more to the total war effort.
8. Post-war planning should be directed toward the development of an improved tenure pattern that should be encouraged.
9. As part of the tenure program, we should develop and encourage a plan which will expand normal industrial labor requirements following the war and encourage industry to continue to find employment for the major part of the labor it is now using.
10. The Farm Security Administration might well go through its roster to select those not able to contribute materially to production and to place them in other occupations.
11. Special consideration should be given to agricultural credit and land values as they relate to inflation and farmer indebtedness."

At this conference a subcommittee consisting of O. G. Lloyd, Indiana; R. R. Schickele, Iowa; Joseph Ackerman, Farm Foundation; and H. C. M. Case, Illinois, were appointed to further develop a report pertaining to five major land tenure problems which the entire committee agreed were of special wartime significance. The report is as follows:

"1. Farm real estate prices and mortgage debts

It is highly important that research workers keep close watch over the developments in the land market during wartime. Land purchase involves long-time commitments and the assumption of debt obligations for many years ahead. If the disastrous effects of the land market collapse, which inevitably follows a land boom, are to be avoided, the most effective way is to head off the boom before it reaches dangerous proportions. The payment schedules on mortgage loans should be kept flexible as a means of avoiding credit disasters in periods of financial distress.

Farm ownership is not advisable until the buyer can become an owner without undue risk of losing his equity in the farm. Special attention should be given to the relative position of current land prices and the probable

long-time price of land in determining the initial equity in land purchases. We need to know not only the prices at which land is transferred, but also the characteristics of the buyers and sellers, the relative amount of down payments, the terms of sale contracts and payment schedules of mortgage contracts, intent of ownership, frequency of transfers, etc.

There is a great need for exploring various means of controlling farm real estate prices and keeping them more nearly in line with the long-time production capacity of the land and an expected long-time general price level. The adherence to standard appraisal technics and loan limits, the requirement of higher down payments in periods of high prices, certain regulations regarding sale contracts and flexible-payment plans on mortgages, licensing of real estate dealers, capital gains taxes, etc.—all these means need a thorough evaluation of their possibilities and limitations.

The danger of a serious war land boom and a post-war collapse is especially great in certain farming regions, of which the Corn Belt is one. There is a consensus of opinion regarding the desirability of curbing a land boom and of cushioning the impact of a probable post-war slump upon the tenure and mortgage debt structure in agriculture. There is agreement regarding the fact that once a land boom gains momentum, the foresight of individuals and of credit agencies is powerless to curb it, and that it takes strong concerted action to cope with this problem. It should be a function of the state agricultural colleges to assemble and analyze available facts and prepare information needed for the formulation of effective policies for land market controls.

In some experiment stations there are projects to study farm real estate prices. The work in land tenure should recognize this, and where such projects exist, tenure studies should be coordinated with the real estate studies so there will not be duplication of effort.

2. Shifting of low-producing and surplus farm labor into high-producing agricultural areas and into non-agricultural occupations

There are many farm families, in sub-marginal farm areas, as well as dispersed throughout the Corn Belt proper, whose labor productivity is low largely because the land is sub-marginal or nearly so. It is in the interest of the immediate war effort, as well as the rural welfare, to induce such labor into productive agricultural areas or out of agriculture into lines of production where the productivity is substantially higher.

Research in this field is needed to develop criteria of productive efficiency that can be used to determine the individual farm families who are below a certain efficiency level and who may be advised and assisted to find more productive and profitable employment opportunities in agriculture, in war industries, or other occupations. Study of the problem should include the effect upon educational facilities and other institutions.

3. Father-son business agreements and labor participation agreements

While father-son business agreements are important at all times in encouraging the succession of the same family on the same farm, they have added significance during the war. With the prospect of war service, young men regard their establishment as independent farmers a hazardous busi-

ness undertaking. Well developed business agreements providing for joint farm operation by father and son, even though additional land is rented, avoid unwarranted investments in new sets of farm equipment. Closely associated with father-son business agreements are agreements providing for a participation of labor in the earnings of the farm. They assure the operator of a more certain supply of labor and give labor an opportunity to participate in the increased earnings of agriculture. Arrangements such as discussed above should be studied more thoroughly since they ought to be more generally used both at present and when the soldiers return home.

4. Landlord-tenant relations and productive efficiency

A major objective of war-time tenure research should be to examine the extent and character of differences in production conditions between tenant- and owner-operated farms. Various studies indicate that (1) insecurity of tenure, (2) lack of soil and building improvements or of compensation for unnecessary deterioration, and (4) variations in methods of renting are important causes of undesirable landlord-tenant relations and contribute to inefficient production.

It is well established that the most desirable systems of farming require that farming operations are planned several years in advance. This is especially true of livestock production. As a part of the agricultural war production effort, the land tenure educational program should be made more effective. It should provide for the improvement in organization of farms handicapped by the conditions of farm leases, heavy indebtedness, or inadequate facilities, which require special attention in the light of the production goals for livestock and livestock products. The organization and operation problems of farms vary from area to area, and from farm to farm within the same community, due to differences in the form of tenure, productivity of the soil, degree of indebtedness, market facilities, and other conditions—so that studies pertaining to improved farming in all tenure groups must be adapted to the particular problems involved.

Farm lease adjustments are needed which anticipate production difficulties. Insecurity of stay and frequent moving of tenants are reflected in a relative deficiency in farm improvements and productive organization on rented farms, which handicap efficient production of both crop and livestock products. Frequent moving indicates an effort on the part of many tenants to improve their economic and social status.

In periods of fluctuating costs and income, provision, based upon research, should be made for adjusting farm leases—and especially cash leases—in order to improve their equitability to both landlord and tenant.

5. Production credit

Another war-time aspect of tenure conditions toward which research should be directed is the adequacy of credit facilities relative to the production needs in various tenure groups. While it appears that agricultural production credit is adequate in most areas, it is important that the war production effort is not handicapped by insufficient capital. Capital can be obtained from borrowing or from past savings, or from reinvesting part of the current income.

Agricultural production credit should be granted according to where it will yield the greatest result in aggregate output of the products we want to increase. It should be directed as much as possible into production goods not competing with industrial war demands, and should not be used to merely transfer limited supplies away from someone already using them efficiently, or in greater need of them in terms of increased food production. Injudicious use of credit, resulting from overexpansion in one enterprise or area or on inefficient farms at the expense of others that are equally important in the agricultural war program, should be avoided.

We need to know more about the conditions under which farmers in various tenure groups (e.g., crop-share tenants, cash-rent tenants, encumbered and unencumbered owners) and in various income levels can secure various kinds and amounts of production credit from existing credit agencies. In addition, we need to know how the customary rules and principles which govern these credit agencies in the granting of production credit are affecting farmers in various tenure situations and on various income levels.

There are many farmers who need to be informed of how a wider and more diversified use of production credit will aid them in the war production program. At the same time, farmers should be cautioned to use such credit only for urgent production needs. It may be more necessary to redirect the credit flow than to increase its volume.

In some experiment stations agricultural finance is handled as an independent division of work. The work in land tenure should recognize this fact, and where such projects exist, our tenure studies should be coordinated with the credit studies so that there will be no duplication of effort."

The first of the five topics was later developed as a cooperative project with the Bureau of Agricultural Economics and developed throughout the region, while each of the other subjects has received emphasis in some of the states during the past year.

At the Des Moines conference, it was recommended that the chairman use his discretion in calling together subcommittees or the entire committee as conditions might justify.

In September, 1942, a subcommittee consisting of J. I. Falconer, O. R. Johnson, G. S. Wehrwein, and H. C. M. Case met at the Farm Foundation with Joseph Ackerman and M. D. Harris to discuss current developments pertaining to the work of the committee. It was the consensus of opinion of this group that the war emphasized certain responsibilities of the committee and that a weakness of the committee at this time lies in the fact that most menbers of the committee are heads of departments or divisions of work requiring administrative, teaching, and research responsibilities outside of the field of land tenure, while the loss, or rapid turnover of younger personnel, is limiting to a considerable extent the continuity of ef-

fort upon any but the most urgent types of research which are immediately applicable to wartime problems. There was general agreement that this situation made it necessary to draw upon past research, limited current research, and "personal judgment based upon past experience" in meeting current land tenure problems. The subcommittee further recommended that the regional committee might well go far in preparing brief reports upon current problems of primary importance which might be helpful for use in the individual states when associated with local data and in placing important issues more forcefully before the public. As an example, the subcommittee prepared the following resolution which was submitted to all of the committee members before it was released:

"It is the opinion of the North Central Regional Land Tenure Committee that ways and means should be found to retain on farms those farm owners, tenants, and in needed cases farm laborers when the acceptance of such persons into the armed forces of the United States or in war industries will result in a serious reduction in the production of agricultural commodities essential to the war effort. Such drawing off of key farm people for military service or defense work is resulting in idle farms, sale of livestock herds, and curtailed production of agricultural products deemed essential to the war effort."

In presenting the resolution, it was stated that:

"The place of competent farm operators in securing an adequate food and fiber supply is supported by research findings of the agricultural colleges which indicate that total production, as well as the efficiency of production varies widely upon the same type of soil, due to the ability of the farm operator. Members of the committee recognize that many farm operators are located on tracts so small, or on land so unproductive, that their labor supply would contribute more to the war effort if employed elsewhere."

Although farm labor problems may not seem at first to be closely related to land tenure problems, the committee reasoned that farm labor as such is not a separate division of work in the agricultural colleges and that man's relation to land is mainly a land tenure problem.

The resolution was released to the states and copies were sent to several prominent leaders including General Hershey, Congressman Fulmer, and Governor Townsend, who acknowledged the resolution and commented on it.

Returning again to the conclusion of the subcommittee, which met in September, 1942, it was agreed that, due to the war emergency, the regional committee should direct its activity to very pertinent aspects of land tenure. To this end the subcommittee has suggested that the limited personnel and emergency types of problems should to some extent redirect the regional committee's efforts. Although not yet considered by the regional committee, the subcommittee recommended:

"1. More emphasis be given to the preparation of short reports based upon past research, limited current research, and the judgment of the committee on land tenure topics of wartime significance, such as the following:
   a. Labor as it pertains to desirable land tenure.
   b. More efficient production through stability of tenure.
   c. Wartime policy for indebted farm operators.
   d. Tenure implications in the flow of nonagricultural capital into agricultural lands.
   e. Back-to-the-land movement.
   f. Reallocation of resources.
   g. Adequate size of farm operating units.
   h. Cooperative use of available labor and farm resources.
2. The assembling and collecting of basic existing data, including a graphic presentation of all material pertaining to tenure, that will contribute to the understanding of a desirable tenure program. The basic objective to this work, which will be financed by the Farm Foundation is to assemble in usable form existing data which will be useful in developing sound post-war land tenure policies.
3. The development by the committee of a set of objectives to be attained under an improved system of land tenure."

The resolutions respecting the farm labor situation illustrates the first recommendation of the committee. With reference to the second item, the subcommittee decided to use a portion of the funds made available for the North Central regional committee in assembling basic data pertaining to the region which would help provide a background to support such pronouncements as may seem desirable to secure a proper presentation of the land tenure situation in the region.

With reference to the third item, the subcommittee felt, while major emphasis will be upon current problems, that the committee should attempt gradually to evolve a set of objectives or principles to which the committee could agree and which should prove useful in evolving clear-cut policies pertaining to securing an improved system of land tenure for the region.

FARM LABOR ADJUSTMENTS AFTER WORLD WAR I

HARRY SCHWARTZ
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DISCUSSION of the post war problems and adjustments facing American agriculture has already been begun in many quarters even though the day of final victory is still far off.[1] Quite properly, most of this discussion is centered upon the production and tenure changes our farmers must make to win the peace and to maximize the benefits of victory. It would be unfortunate, however, if these deliberations did not take into account hired farm workers. Many of our present war difficulties in securing adequate agricultural labor can be traced to neglect of these workers in the years before Pearl Harbor. Plans must be formulated today if agriculture's wage workers are to be used most efficiently in post war production efforts, and if these fellow citizens are to enjoy equally the Four Freedoms.

Before attempting to frame farm labor policy for our own post war era, it will be useful to consider what happened after World War I. This paper will be devoted primarily to such a review, followed by brief consideration of some of the more important problems in this sphere likely to face us after victor. Limitations of space make it feasible to consider only relatively short run developments here.

Farm Labor Shortages

During the two years following the Armistice, the chief farm labor problem recognized in this country was that of providing sufficient workers to cultivate and harvest the crop, and to tend the livestock. The farm labor shortage during the war was caused largely by the departure of about 2,500,000 family and hired farm workers from their usual occupation. Of these, about 1,000,000 joined the armed forces and over 1,500,000 went into non-farm work.[2] The conclusion of the conflict did not end the shortage, but actually intensified the relative scarcity of workers at wages farmers were willing to pay. Continued industrial prosperity attracted addi-

[1] Cf. the articles by Young, Bottum, Linville, and Black in the February, 1942 issue of this JOURNAL, and the Winter 1943 issue of the *Land Policy Review.*

[2] G. I. Christie, The Farm Labor Outlook for 1919, JOURNAL OF FARM ECONOMICS, 1 (1): 9, June, 1919.

tional farm people to the cities. It also induced large numbers of farm boys in the armed services to seek their livelihoods in urban industry after demobilization rather than return to the fields. Table I presents the statistical picture of the farm employment and wage changes during the period we are considering:

TABLE I. INDEXES OF FARM EMPLOYMENT AND WAGES FOR SELECTED YEARS, 1914–1925
(1910–14 = 100)

Year	Total Farm Workers	Family Workers	Hired Workers	Farm Wages
1914	100	99	101	101
1918	94	93	99	177
1919	92	91	97	207
1920	94	93	100	242
1921	94	93	101	155
1922	95	93	101	151
1923	94	93	100	169
1924	94	93	100	173
1925	95	94	99	176

Source: Derived by the author from basic data supplied by the Bureau of Agricultural Economics.

One of the most striking facts apparent from Table I is that the peak in farm wages during this period was not reached until two years after World War I had ended. Farmers were forced to raise farm wages approximately 40 percent between 1918 and 1920 in order to maintain their supply of hired workers at about the same level as in 1918. This increase was in addition to the 60 percent rise in farm wages that had occurred in the preceding two years.

As might be expected from the above data, 1918–1920 was a period in which cries of farm labor shortage were heard abundantly from rural areas all over the land.[3] In this post war period, however, there was no longer the patriotic incentive of war need to induce non-farm volunteers to come to the fields and help. Moreover, the United States Employment Service—with its nationwide chain of recruitment and placement offices—was abolished in 1919. Its Farm Placement Service was retained as the result of farmers' complaints that they needed help in finding labor. But having only limited funds and little in the way of accurate data on farm labor supply and requirements, the Service's activities were rather restricted. They were confined mainly to recruiting and directing workers to

[3] Cf. E. M. Colvin and J. C. Folsom, Agricultural Labor in the United States, 1915–1935, Washington, 1936, pp. 306–19.

the Middle West's wheat harvest, and ignored the needs of California, Washington, New Jersey, and other areas having large fluctuations in seasonal labor needs.[4]

Prof. Lescohier has attributed the farm labor difficulties during this period to the "relative undesirability of farm work as a means of livelihood," arising from low farm wages, irregularity of employment, need for remaining single, more interesting life in cities, and the small opportunity of advancing from farm worker to farm owner.[5] Table II presents data illustrating the relative economic unattractiveness of hired farm labor when compared with industrial labor during this post war era:

TABLE II. AVERAGE ANNUAL EARNINGS AND FULL TIME WEEKLY EARNINGS OF HIRED FARM AND INDUSTRIAL WORKERS, 1919–1925

Year	Annual Earnings		Weekly Full Time Earnings	
	Farm Worker	Industrial Worker	Farm Worker	Industrial Worker
1919	$544	$1,148	$18.18	$28.78
1920	617	1,368	20.76	32.57
1921	400	1,154	12.72	27.62
1922	385	1,119	12.42	26.04
1923	421	1,239	13.50	27.58
1924	426	1,244	13.74	27.51
1925	433	1,267	13.74	27.45

Sources: Annual earnings data taken from Witt Bowden, Three Decades of Farm Labor, Bureau of Labor Statistics, Serial No. R. 976, Washington, 1939, p. 22. Estimates of average weekly full time earnings of farm workers derived from Bureau of Agricultural Economics data on daily wage without board, assuming a six day week. The data on industrial workers' weekly full time pay are based on the National Industrial Conference Board's series for twelve industries as given in Recent Economic Changes in the United States, New York, 1929, p. 433.

Satisfactory data for changing these monetary comparisons to comparisons of real incomes are lacking, but the apparent differences in return indicated above are probably too great to be explained by differences between rural and urban living costs. In any case, movements of workers are frequently guided by comparisons of alternative money incomes, since most workers have inadequate data or experience to enable them to make comparisons of real return.

Two more interesting facts may be deduced from Table II. Farm

[4] R. C. Atkinson, L. C. Odencrantz, and B. Deming, Public Employment Service in the United States, Chicago, 1938, p. 423.

[5] D. D. Lescohier, The Farm Labor Problem, JOURNAL OF FARM ECONOMICS, 3(1): 10–15, January, 1921.

workers' full time weekly earnings ranged from 46 to 63 percent of the corresponding industrial workers' earnings in the data above. Farm workers annual earnings, however, ranged from 34 to 47 percent of the industrial workers' annual returns. The movements in both percentage series were roughly parallel during the period studied. This phenomenon is explained, of course, by the greater irregularity of farm work and the fuller employment enjoyed by the employed city worker. A second interesting fact is that the ratio of farm workers' earnings—both weekly and annual—to industrial workers' earnings declined sharply over the period considered above, most of the decline occurring in 1921. This would seem to indicate that for employed workers in both city and country, the relative disadvantage of hired farm laborers actually increased after 1920. Increased urban unemployment after 1920 drove many city people to seek farm jobs and tended to lower farm wages. But the employed farm worker comparing his lot with that of the employed city worker found increased incentive to move after 1920, if he was willing to take the chance of getting a job. This is a factor that may help explain the sharp rise in net emigration from farms in 1921 and 1922 compared to 1920.[6]

The Soldiers Return

It is highly important to note that the demobilization of the armed forces during 1919 and 1920 did little to alleviate farmers' difficulties with farm labor supply and wages. The data of Table I suggest very strongly that large numbers of demobilized soldiers who had originally lived on farms went to the cities after returning from war and were successful in getting jobs because of the prosperous conditions existing in 1919 and most of 1920. Those who did return to the farms were more than balanced off by those farm people who left for non-farm work.

For more than a year after the Armistice there was great concern about what to do with the demobilized soldiers and sailors. Unlike the Civil War leaders, those managing the affairs of state in 1918 and 1919 had no great stretches of public domain to which a new Homestead Act could send the returned heroes. Pessimistic observers pointed to the passing of the frontier and thought darkly of possible disorders resulting from the economy's failure to absorb the men who had fought. The farm labor shortages, they thought,

[6] Agricultural Statistics 1941, Washington, 1941, p. 545.

were merely transitory phenomena which would be ended once the full flood of demobilization had gotten under way.

Efforts were made to initiate large scale resettlement projects. Secretary of Interior Lane put forward a suggestion that $500,000,000 be spent reclaiming waste lands in the West and South so as to permit soldier settlement. President Wilson supported this proposal in a message to Congress, and the Land Reclamation Bill was considered during most of 1919 and early 1920. It failed of passage when it became fully evident that no such giant effort was needed to reabsorb the returned fighting men.[7] Ex-service men were given prior rights of entry when the North Platte and Shoshone irrigated lands in Wyoming were opened in early 1920,[8] and a similar purpose inspired the opening of a large number of farm training schools for ex-service men during the summer of 1919.[9]

Spurred on to maximum production by rising prices and government urging, farmers continued to use the expedients adopted during the war in order to augment their labor supply. Mexican workers were imported by the thousands during 1919 and 1920 under special exemptions granted beet growers, cotton farmers, and other farm employers permitting them to disregard the head tax, literacy, and other restrictions of the immigration law. A committee which investigated reports that these Mexicans were taking jobs away from American citizens reported that the charges were untrue since demobilized soldiers and other citizens could get plenty of good jobs in the cities and did not want farm jobs.[10]

High school and college students, women, vacationing industrial workers and others were called upon to help harvest the crops. The spectre of famine was raised by farm spokesmen who predicted starvation in the cities if enough workers did not come to the fields. Such organizations as the Woman's Land Army and the American Land Service helped mobilize volunteers for work in the fields. Governor Smith of New York appealed to school superintendents and business men to make vacation labor available for the farms to avert famine.[11] In Columbus, Ohio, 2,000 business men pledged

[7] New York Times, April 25, 1919, May 16, 1919, May 21, 1919 and subsequent issues.

[8] Ibid., Feb. 6, 1920.

[9] Ibid., July 13, 1919.

[10] Results of admission of Mexican laborers under Departmental orders for employment in agricultural pursuits, Monthly Labor Review, November, 1920, pp. 1095–97.

[11] Ibid., June 16, 1920.

themselves to work one day a week on farms to avert food shortages.[12] All over the country public policy and volunteer action on farm labor was premised on the assumption that farmers had made all the upward wage adjustments they could afford, and that nonpecuniary incentives—such as the spectre of famine—had to be used to get additional workers.

The major adjustment of farmers to the increasing scarcity and high cost of labor was ever more rapid mechanization. In 1919 and 1920, farmers bought 200,000 tractors as compared to 146,000 in the previous two years, and on January 1, 1921 the number of tractors on our farms was almost 250 percent the number on our farms on January 1, 1919.[13] This increased mechanization increased the output per farm worker, and cut down the labor formerly required to grow the food and take care of the millions of horses and mules on our farms.[14] Development and use of more efficient specialized machinery for planting, cultivating, and harvesting particular crops also increased enormously during the decade after World War I. Perhaps the outstanding change in labor requirements occurred in the wheat area where the widespread adoption of the combine wiped out most of the need for the huge mass migrations of wheat harvesters across the central plains from Texas to North Dakota.[15]

During 1921 and 1922, the farm labor situation was more to the farmers' liking, although farm operators suffered tremendously from the price declines which began in late 1920. The Federal Reserve Index of Industrial Production dropped about 25 percent in 1921 as compared to 1920. As a result of the greatly increased unemployment in that year more workers were willing to take farm employment than at any time since the beginning of the war. One reflection of this was the drop of about 40 percent in the index of farm wages in Table I. A survey of employment directors in 42 states, held early in 1921, reported an ample supply of workers willing to work at much lower wages than had prevailed in 1919 or 1920.[16] Much the same situation existed for most of 1922, but in

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[12] Ibid., May 26, 1920.

[13] Recent Economic Changes in the United States, New York, 1929, p. 559.

[14] Cf. J. M. Hopkins, Changing Technology and Employment in Agriculture, Washington, 1941, pp. 68–70; and Bowden, op. cit., p. 32.

[15] Cf. Carey McWilliams, Ill Fares the Land, Boston, 1942, pp. 91–108, and R. M. Cullum, J. C. Folsom, and D. G. Hay, Men and Machines in the North Dakota Harvest, Washington, 1942, processed.

[16] E. H. Tayler, What Must I Pay for Farm Help?, *Country Gentleman*, April 2, 1921.

1923 and 1924 industrial production picked up again, unemployment decreased, and farmers had to raise their wage offers as well as speed up their mechanization.

It is interesting to note that as long after the war as 1923 and 1924, emergency techniques for getting farm workers were resorted to and warnings of famine if more farm workers were not available came from farmers' spokesmen. In 1923, a survey of the Massachusetts situation revealed efforts to mobilize workers by establishing camps for high school and college students.[17] In May of the same year, the New York State Department of Labor issued an appeal for women to become farmerettes in order to insure adequate food production,[18] while in June the Pennsylvania Department of Labor and Industry reported that some farms in that state were idle because of lack of workers.[19] In California, farmers convened in Sacramento in January, 1924 and set up an organization to help secure adequate supplies of workers at wages the farmers were willing to pay.[20] A review of the literature indicates that all through the 1920's farmers were most bitter because of the industrial competition for their labor, competition which took the form of much higher wages and much better working and living conditions. It was this that resulted in farm labor "shortages."

We may summarize this discussion by pointing to these salient characteristics of farm labor adjustments after World War I: (a) No systematic public policy was formulated to help ease the transition; (b) The adjustments that did take place were profoundly affected by the cyclical changes in industrial production that took place after 1918. In particular, the prosperity of 1919 and 1920 permitted the orderly reapsorbtion of demobilized soldiers, while forcing farmers to cope with relatively scarce and expensive labor, thus fostering mechanization and emergency recruitment of workers; (c) The effort to organize the farm labor market which had begun in 1917 and 1918 was largely abandoned after the war since the Farm Placement Service went little beyond aiding the orderly harvesting of the Mid-Western wheat crop, leaving other farm labor markets chaotic.

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[17] Labor Supply and Acreage, *New England Homestead*, May 26, 1923.
[18] New York Times, May 31, 1923.
[19] Ibid., June 13, 1923.
[20] Ralph Newman, Farmers Attempt Solution of Labor Problem, *Pacific Rural Press*, 107: 140, 1924.

When Victory Comes

Two factors seem to make it most likely that an organized public policy carried through by government agencies will be the chief force working during the adjustment period after victory has been won by the United Nations. The first factor is the tremendously increased size of the problem over that faced after the Armistice since we shall probably have roughly ten million men in the armed forces when the war ends. The second factor is the education our people have received over the past decade in the possibilities of government action as an effective means of avoiding widespread distress resulting in maladjustment in our economic system. Accepting this premise, let us state briefly some of the major problems with which those who will formulate public policy in this area will be faced, and let us see what suggestions are offered by our review of the first World War's experience:

1. How shall we assure an adequate labor force for our farms even after victory is won? Huge demands for farm products to feed the conquered and freed countries will continue for several years after the war, yet it will be precisely then that the largest fraction of our labor force will be off the farms, and that our stock of farm machinery will be in the worst shape because of obsolescence and lack of repair. The armed forces are likely to be demobilized only slowly since there will be need for garrisoning large conquered areas. Industrial workers are likely to be kept at their posts, both to supply our occupation armies and to satisfy the long frustrated and pent up demands for consumer goods by our own people. Undoubtedly, it will be essential to continue those mechansims and techniques for organizing the farm labor market which will have been developed during the course of the war. Widespread use of the employment service, organized provision of transportation and housing for seasonal farm workers, these and other measures must not be dropped as soon as the enemy is made prostrate.

2. What can and should the role of agriculture be when the time comes, perhaps several years after the conclusion of fighting itself, for large scale demobilization of the armed forces? Even if only for a temporary period, our farm lands may have to reabsorb several millions of these fighters. Shall government policy be directed at making these soldiers owners of small farms, or shall it be content if they provide a convenient increase in the supply of available hired

farm labor, with possible demoralizing effects on farm workers' wage and living standards.

3. On the assumption that our leaders will attempt to effectuate the post, war aims now being voiced by Vice-President Wallace, Sir William Beveridge and others of like mind, how shall the benefits of the "Century of the Common Man" be assured for hired farm workers? Presumably this will require equalization of economic returns and social protections in both agriculture and industry. What provision should be made—both during and after the conflict—for an orderly transition from an agricultural cost structure predicated upon very low and flexible farm wages to one quite different? How are the interests of farmers and consumers to be protected while these adjustments take place? Mechanization will probably be one aspect of the answer in our post war era as it was after 1918, but this in turn means that other aspects of our economic policy must take into account an appreciable lowering in the proportion of our labor force engaged in agriculture. The questions involved here would be complex in any period. They will be made no less difficult by being intertwined with the other difficult adjustment problems of the post war period.

The problems posed above do not exhaust the field by any means, but they do indicate the scope and importance of the farm labor aspect of post war agricultural adjustments. It is to be hoped that our planners and policy makers will take adequate account of these problems while the rest of us are still forging the victory of the United Nations.

FARM LABOR SITUATION AND ITS EFFECT ON AGRICULTURAL PRODUCTION IN THE CORN BELT

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A THOROUGH knowledge of trends in the use of labor and machinery for the past twenty years is essential to any accurate appraisal of the current or future farm labor situation. At the beginning of 1942 uninformed sources inaccurately predicted that agricultural production in the corn belt would be seriously reduced by the labor shortage. Those, however, who had studied the trends in the use of labor and machinery, maintained that, with favorable weather, production could be kept at a high level. Fortunately, 1942 weather conditions were propitious, and agricultural production in the corn belt, as in most other sections of the United States, was at record high levels.

Long-Time Trends in Use of Labor and Machinery in the Corn Belt

The following facts from Illinois farm accounts are indicative of developments in the corn belt for the past twenty years which made the record agricultural production of 1942 possible, despite a greatly reduced farm labor supply.

1. There was a large increase in the use of such labor-saving machinery as tractors, tractor cultivators, combines, two-row corn pickers, field silage cutters, pickup balers, and milking machines. The volume of machinery, gas, oil, and repairs purchased per farm was 180 percent greater in 1941 than in 1926. Noteworthy, too, is the fact that the inventory value of machinery increased 66 percent over this same period of years.

2. The average size of farms increased; Illinois accounting farms were 20 percent larger in 1941 than in 1926.

3. The amount of labor available per farm remained unchanged from 1926 to 1941.

4. The labor input per acre of crops declined sharply. Hours of labor used per acre for selected crops on central Illinois farms were as follows:

	1919–1921	*1939–1941*
Corn	16.9	7.7
Wheat	14.2	8.6
Soybeans	13.4	4.3

5. The hours of labor input per farm and per worker also de-

clined. The following data are typical of conditions in central Illinois:

	1923	*1941*
Crop acres per farm	231	246
Hours of labor input per farm	6,209	4,481
Hours of labor input per month per worker	251	206

The hours of input per month per worker were only 190 for each of the four years, 1937 through 1940.

As a result of these factors—namely, the increase in mechanization, the decline in the labor input per acre of crop, the constant labor supply per farm, and the failure of farms to increase in size sufficiently to absorb the labor saved—a surplus of labor was available on corn-belt farms at the beginning of 1942. In a period of national manpower shortage, it is natural for the farms to furnish labor both to industry and to the armed forces. This dissemination, of course, accounts for the disappearance of the surplus farm labor during 1942.

Developments during 1942

Throughout 1942, the Selective Service System and higher wages in industrial centers and at defense plants continued to take workers from corn-belt farms. Some areas were more seriously affected than were others. In general, the farm labor situation was most acute in the dairy areas and on those farms situated near defense plants. The situation was least critical on cash-grain farms not located near industrial or defense areas. The grain farms were favored by the fact that increased mechanization saved more labor in the production of crops than in the production of livestock. This factor accounts for the greater surplus of labor at the beginning of 1942 in the grain areas than in the dairy or livestock areas. Furthermore, the use of tractor power enables farmers to work at crop production for many hours a day during "rush" periods. Last spring, in many sections there were several periods of rainy weather when farmers were badly behind with planting and cultivation of both corn and soybeans. During the three-to four-day periods when the land was capable of being worked, farmers put in long hours and, for the most part, were able to catch up with their work; at least, Illinois corn and soybean yields were at record levels in 1942. In the eleven corn-belt states the estimated corn production for 1942 was 25 percent greater than that of 1941, and in seven of the corn-belt states, 1942 soybean production was 92 percent above

that of 1941. This high level of crop production was made possible by high average yields resulting from improved practices and favorable weather conditions, a high degree of mechanization, longer working hours than those of the four-year period prior to 1942, and the ability of farmers to do a tremendous volume of work in critical periods.

Very few Illinois farms have more than three workers; therefore, the loss of one worker makes a large percentage decrease on the farm involved. The departure of one man creates a loss ranging from 33 percent on the three-man units to 100 percent on the one-man units. Since the farms that have lost workers are interspersed with others in the same community that still have a prewar labor supply, it follows that the labor situation varies from farm to farm in any area. These facts are pertinent to the solution of the labor problem for 1943 in that they suggest the necessity of pooling the labor resources of the community. Enough workers must be left in each community so that the goals for 1943 can be met by having both labor and machines exchanged from farm to farm in ways that will secure the maximum efficiency.

The wide variation in the labor supply from farm to farm explains why erroneous conclusions were drawn relative to the seriousness of the farm labor shortage in 1942. In many instances, only the farms having a shortage were publicized whereas no reference was made to the farms where the labor supply was adequate.

Situation acute on dairy farms. Labor was so scarce by the end of 1942 that no appreciable increase in dairy production was possible. On the other hand, there was only a normal culling of dairy cows from Illinois herds. Some dispersion sales were held, but most of the usable cows went to other dairy farms and the price paid for milk cows remained at a high level.

The situation in the dairy areas was made still more critical by the lack of housing facilities for married men, and by the relative scarcity of single workers. Dairy farmers, even more so than livestock or grain farmers, have in the past hired single men and kept them in the farm home. This, in part, correlates with the fact that many dairy farms are rented on a cash basis, and the owner has no interest in building a tenant house. On livestock farms which have 50-50 livestock share leases, a higher percentage of owners have provided housing facilities for married men.

Dairy farmers (particularly in the Chicago area) have appeared less willing to increase production than livestock farmers due partly

to the fact that farm wages have advanced most sharply in the northern part of the state whereas dairy prices have advanced less than beef, cattle, and hog prices. This situation is indicated clearly by the following data for Illinois which show the average quantities of selected farm products equal in value to a month of hired labor without board for four selected crop-reporting districts:[1]

Farm products and crop-reporting district	1942	1941	1940	1930–39
Bushels of corn				
Chicago dairy district	97	81	93	82
Western livestock district	81	64	83	76
Eastern grain district	82	68	83	76
Southwest Illinois district	62	52	70	65
Pounds of hogs				
Chicago dairy district	552	628	878	672
Western livestock district	455	504	756	584
Eastern grain district	458	534	785	587
Southwest Illinois district	382	450	690	531
Pounds of milk				
Chicago dairy district	2,938	2,796	2,894	2,340
Western livestock district	2,636	2,393	2,646	2,390
Eastern grain district	2,616	2,510	2,699	2,098
Southwest Illinois district	2,023	1,964	2,232	2,093

These data indicate that in 1942 more bushels of corn and more pounds of milk were required to equal the cost of a month of hired labor than for the 1930–39 average in all but the Southwest district. In all districts less pork was required than in the base period. These data reflect both the higher normal farm wage rates in northern Illinois and the fact that the difference between wages in northern and southern Illinois widened in 1941 and 1942.[2] The extent of the widening of farm wage rates is indicated by the following:

Year	Farm wage rates per month, without board		
	Northern Illinois	Southern Illinois	Spread
1942	$70.75	$49.25	$21.50
1941	57.30	40.50	16.80
1940	48.40	36.75	11.65
1930–39	42.70	31.85	10.85

The spread in wage rates between northern and southern Illinois was twice as large in 1942 as for the 1930–39 average and indicates

[1] Data from Illinois Co-operative Crop Reporting Service.

[2] In interpreting these data one should recognize that, because of larger production units, greater mechanization, and more productive soils, a month of labor produces a greater volume of products in northern than in southern Illinois.

the possibility of shifting workers to the more intensive producing areas in the northern part of the state.

The Situation for 1943

If the assumption that the labor supply in the corn belt at the end of 1942 was barely adequate to harvest the crops and care for the livestock is correct, two alternatives are available for 1943 if the level of agricultural production is to be maintained or increased: (1) The present labor supply must be maintained or increased, or (2) the efficiency of the workers remaining on farms must be increased.

Since the goals for 1943 call for increased agricultural production (equivalent for Illinois to the full-time labor of 8,000 men), it is evident that the number of farm workers cannot be appreciably decreased below the level that prevailed at the end of 1942. There is a surplus of workers on some farms and in some areas, but these workers are needed on other farms in the same or adjacent areas. Any further drain of farm workers from the corn belt into the armed forces or into industry involves the replacement of this supply, either by workers from outside the corn belt or from the nonfarm population within the region.

Possibilities of maintaining or increasing the farm labor supply. The maintenance of the farm labor supply at the level on farms, December, 1942, calls for the discontinuance of inducting necessary farm workers into the armed forces as well as prevention of further migration of workers into nonfarm positions.

Instructions sent to local selective service boards in December, 1942, contain directions, both for classifying necessary agricultural workers in Class II-C or Class III-C and for their deferment. Forms have been furnished which will aid local boards in determining the amount of labor needed to keep a farm in operation. These forms provide "conversion factors" for calculating the number of "war units" for each farm, based on the acreage of each crop and the number of various kinds of livestock there are on the farm. This procedure indicates that authorities in Washington realize the importance of keeping enough labor on farms to secure the needed agricultural production. However, the mere sending of forms and instructions to local boards may not be sufficient.

In counties that are predominantly agricultural and from which many men have departed to work in defense plants, selective service quotas for next year must be filled largely from farm workers as there are relatively few men of draft age left in the villages and

the county-seat towns. If the present supply of agricultural workers is to be kept on farms in counties of this type, either there must be a change in the method of allocating quotas, or local boards must refuse to fill quotas from necessary farm workers. The men necessary for the armed forces in 1943 must, therefore, be drawn largely from nonessential industries, and this will, no doubt, necessitate the induction of increasing numbers of married men and others in industry who have to date been deferred, but are replaceable by women or older men. The smooth functioning of recent regulations will call for close supervision of local board activity by state headquarters.

Unless national legislation prevents it, there will be a further drainage of manpower from farms due to the inducement that high wages paid by industry and defense plants offer. With price ceilings on farm products, there is a limit to the wages farmers can pay for labor. On the other hand, some farmers can afford to pay their hired man more in 1943 than they paid in 1942, for agricultural incomes have increased sharply as a result of both increasing farm prices and volume of products sold.

A comparison of incomes and total labor costs on Illinois accounting farms shows that the proportion of the total income needed to pay hired labor and make a comparable allowance for operator and family labor (operator and family labor was charged at hired man's rates) has declined steadily in recent years. In 1941 and 1942, approximately 16 percent of the gross income was charged off as labor expense, the lowest percentage for any year since 1926.

This decline in the proportion of income required to meet labor costs on the accounting farms is due to the following factors—an increase in the average size of farm, the adoption of labor-saving machinery, the use of improved production methods, and rising farm prices. Labor costs have actually risen in this period, but to a lesser extent than farm income. Since the decline in labor costs in relation to income is attributed, in part, to the increased use of power machinery, it is significant to note that, for the state as a whole, the proportion of income needed to meet power and machinery costs has also decreased slightly during recent years.

Under conditions prevailing in 1942 and likely to continue in 1943, it is to the farmer's financial interest to use types of labor not formerly considered satisfactory, and to pay higher wages than those paid in 1942 in order to keep enough farm workers to meet 1943 goals. The strong demand for farm products means that large

quantities can be marketed at favorable prices, and it will be both patriotic and profitable to incur additional expense and inconvenience in order to maintain high production.

The farm labor supply for 1943 should be augmented by a policy of vigorous recruitment. Every available worker who is physically fit must be considered. All unemployed and underemployed people, such as older or retired persons, businessmen who can close their places of business for a part of the time, and boys and girls who can contribute even in a small way, must be recognized as potential farm workers. Plans developed by local farm labor committees must be broad enough to provide for the complete recruitment of all local persons. The United States Employment Service should recruit farm workers from labor surplus areas and, in cooperation with other government agencies, transport these workers to labor deficit areas. The United States Employment Service has developed the mechanism for providing itinerant workers for seasonal jobs and this phase of the program should not falter in 1943.

The use of city youths for farm work in many areas last year proved satisfactory, and their contribution in 1943 should be even greater. Many farmers, hitherto unwilling to use inexperienced help, will use city boys in 1943 during periods of acute shortage. In Illinois, a plan is under way to provide a series of ten farm study units for city boys and girls who wish to work on farms in 1943. These lessons are designed to inform the city youth of the farm labor shortage and to acquaint them with farm conditions. They will be used in connection with a recruiting policy which will attempt to eliminate those unfit for farm labor. Materials designed both to interest farmers in the use of city youth and to aid them in guiding the boys and girls during the initial period have been prepared for farm discussion meetings. A survey will first be taken to discover how many city youth will be needed and figures from it then will be used as a guide in determining the extent of the recruitment program.

Possibility of increasing the efficiency of farm labor. Fifty-one central Illinois farmers, out of a group of 535 account keepers for a three-year period, produced 22 percent more products per acre than the average of the entire group; yet, they used 13 percent less labor. This indicates that even with their existing labor supply, many farmers can increase their production in 1943 if they will make the necessary changes in operating practices. The following are some of the changes that may be used to increase operating efficiency:

1. *Changes in farm organization.* Some operators who have a labor distribution which calls for but little labor in some months may increase their production of livestock, or they may work for their neighbors during these slack periods. Farmers who have surplus family labor may increase their production of dairy products and poultry. Farmers unable to replace the labor they lose to the armed forces or to industry may market their roughages through beef cattle or sheep rather than through dairy cattle which require more labor. The dairy cows which such farmers sell should be purchased by those farmers who have surplus labor. All of these changes are being made by some members of a group of Illinois accounting armers who were interviewed.

The productivity of labor is greatly increased by high crop yields and by an efficient conversion of feed into livestock and livestock products. The use of high-yielding varieties of crops, legumes, and manure are important in crop production; and sanitation, balanced rations, and careful management are important in livestock production.

2. *Planned farm work.* Some farm operations must be performed within rather limited periods, but there are many farm jobs that may be done in slack periods, thus avoiding competition with those operations of a fixed nature. Work such as repairing fences, buildings, and machinery, hauling manure, and cleaning and treating seeds, should be done in slack periods. Livestock breeding and feeding operations should be timed to avoid conflicts with the peak load of field work.

3. *Use of labor-saving practices.* Farmers have demonstrated much ingenuity in adopting practices that save labor without decreasing production. The following are a few of the labor-saving practices employed by successful Illinois farmers:

a. Careful planning of livestock chores to save steps.
b. The use of self-feeders of large capacity.
c. Hogging down corn.
d. Piping water to feed lots and fields.
e. Planning convenient arrangements for storage and handling of feeds.
f. Careful loading of tractors.
g. Keeping machinery in good repair in order to avoid the time loss during peak periods.

4. *Exchange of labor and machines.* Farmers are used to exchanging work on some jobs, but in 1943 it will be necessary to do even more of this than before. Those farms that effectively pooled their

labor and machines in 1942 were, for the most part, not troubled by the labor shortage. There are five possibilities for pooling:

a. *Exchange labor.* A group of farmers may make up a harvesting crew, or farmers may exchange work on a day basis.

b. *Use machines for custom work.* More custom work can be done with such labor-saving machines as combines, corn pickers, balers, and tractors.

c. *Exchange use of one machine for use of another.* A corn picker, for example, may be exchanged with a neighbor for the use of his combine. There are times when this arrangement will have a distinct advantage over operating on a custom basis.

d. *Exchange labor for machinery.* Many farmers used to doing custom work could not readily leave their farms to do this work in 1942 because they were short of labor on their own farms. In 1943 it may be necessary for the neighbors to furnish labor in exchange for use of these machines.

e. *Own machines jointly.* It may be practical for a group of farmers on small farms to own combines, corn pickers, hay tools, and other heavy machines jointly.

5. *Cooperative employment of a married man.* Small groups of farmers can join in hiring a married man who, by dividing his time between the farms, will be assured of full-time employment. Such an arrangement will work well where a house can be provided. Sometimes a house can be rented in a nearby village or on a nearby farm, possibly a trailer can be rented or purchased, a house not now fit for use can be repaired, or an apartment can be partitioned off in a large farm house.

The preceding material discloses that both national legislation and better farm planning will be needed to solve the farm labor problem in 1943. The legislation and administration is out of the hands of farmers, but the planning must be done both by individual farmers and by groups of farmers working on a communal basis. Legislation, although it will help, cannot solve the problem alone, nor can a public program succeed unless farmers participate in and support it, both individually and in groups.

Of greatest importance are the methods that farmers themselves work out. In each community, it will be necessary, first, for farmers to make the best possible use of the labor they have, and then to meet additional needs by supporting and taking part in such programs for labor placement as may be developed at the national, state, county, and community levels.

FARM LABOUR SITUATION IN CANADA

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IT IS difficult to provide an up-to-the-minute appraisal of the farm labour situation in Canada because information on a national basis is limited. The National Registration of August 1940 did provide for an analysis on an occupational basis. Several of the provinces have made or are making studies of the available labour and labour requirements. The Economics Division of the Dominion Department of Agriculture made a national survey in February and March 1942.[1] This study was based on replies to a mail questionnaire sent to a sample of approximately four percent of the farmers in all provinces. About 5,200 replies were used as a basis for the analysis. The Agricultural Branch of the Dominion Bureau of Statistics collects wage information annually and from its crop correspondents obtains information on numbers employed on these farms at three dates during the year. The statistical information which will be used in this paper is confined to that provided in the Census of Agriculture, the national survey conducted by the Economics Division and estimates based upon data collected by the Agricultural Branch of the Dominion Bureau of Statistics.

The Decennial Census of 1931 showed that 38.6 percent of the 728,623 farmers hired labour. The figure varied from province to province with Quebec reporting 28.2 percent and Ontario 44.7. The three Prairie Provinces recorded more than 40 percent and in the Quinquennial Census of 1936, 43 percent of the farmers in the Prairie Provinces reported hired labour. In the Economics Division's survey, 68 percent of the farmers reported hired labour. While it is true that there was, in all probability, an increase in the percentage of farmers hiring farm labour, it is also true that in the national survey replies were obtained from a higher percentage of those hiring than from those who had to depend on family labour.

When our estimates were made, the 1941 Census tabulations were incomplete, only a sample could be obtained from which estimates of the number of workers were made. The preliminary tabulations have since become available and the number of male family workers as reported by the Census was 1,220,516. Of this number 238,928 were hired workers. The census also reported, in

[1] B. A. Campbell and J. Coke, Farm Labour in Wartime, Economics Division, Dominion Department of Agriculture, Ottawa, 1942. A mimeographed report now out of print.

addition, 26,106 female workers on farms. This figure would appear to be low because it included only women who were fully or mainly engaged in farm work, exclusive of housework and this would scarcely give full weight to the contribution which farm women were making in the production of food, particularly in reference to seasonal labour shortages.

It is obvious that the number of workers on farms changes from month to month. Thus at January 15, 1940, it is estimated that there were 268,691 male hired workers on farms and on January 15, 1942, there were 162,093, a decline of 39.5 per cent.

If we take May 15, we find the comparable figures were 275,665 in 1940, and 211,900 in 1942, a decrease of 23.2 percent.

August 15 might be considered the peak of farm employment and the comparable figures were 428,942 in 1940 and 292,209 in 1942, a decline of 32.6 percent.

When we consider male family workers 15 years of age and over, it is estimated that the over-all number on March 15, 1942, was 936,266, on the basis of data obtained in the national survey. The Census of Agriculture reported 980,578 male workers on farms at May 31, 1941. Therefore the figure of 936,266 would appear to be quite accurate.

Estimates of family help as of August 15, 1942 are not available. Therefore the over-all situation may only be appraised as of March 1942 when our total farm labour force was estimated to be 1,098,359 persons. The corresponding figure for January, 1940 was 1,346,820. This represents a net loss of 248,461 or 18.4 per cent. Expressed in other terms, on January 15, 1940, there were 147 male workers per 100 farms and by January, 1942, the number had been reduced to 130; at March 15, 1942, it was 127.

In 1940, 5.2 farmers' sons per 100 farms went into the armed forces and in 1941, 9.3 sons per 100 farms went into the armed forces. In 1940, 4.0 sons went to the city to work compared with 5.2 per 100 farms in 1941. Of the hired men in 1940, 8.8 went into the armed forces compared with 12.2 per 100 farms in 1941. Of those going to the urban centres 8.1 departed in 1940 whereas 13.3 per 100 farms went in 1941. There was a small movement of hired men from one farm to another, represented by 3.9 per 100 farms in 1940 and 7.0 in 1941. The movement from urban centres to the farm was quite small.

The number of farm labourers per 100 farms hired on a yearly

basis was 18 in 1941 and 22 in 1942. Workers hired on a per month basis numbered 55 per 100 farms in 1941 and 52 in 1942. Day labourers per 100 farms reporting hired labour numbered 184 in 1941 and 162 in 1942. Since the estimates were made in February and March for 1942, the farmers were probably influenced in their estimates by the uncertainty of the conditions in the approaching summer and by doubts regarding availability of casual labour.

While the growing scarcity of farm labour has been a problem for many farmers the additional expenditure involved in rising wages has added to the farm budget. For the farms reporting in the National Survey conducted by the Economics Division, the average wage with board in 1941 was reported as $351, compared with $411 in 1942. The highest provincial average for 1942 was $484 and was reported in Alberta. In British Columbia the average was $446 and in Ontario $438. The lowest ($344) was reported in Prince Edward Island.

Monthly wages recorded in the National Survey averaged $20.85 during the winter of 1940–41 and $25.55 during the winter of 1941–42. Monthly wages were highest in Nova Scotia during the winter of 1940–41 and highest in New Brunswick in the winter of 1941–42. In the summer of 1941 they were highest in Alberta with New Brunswick and Ontario in second and third positions.

Day wages in the summer of 1941 were also highest in Alberta with Manitoba and Saskatchewan in second and third places, the rates being $2.78, $2.73 and $2.71 respectively. The average for all Canada was $2.38. The Dominion Bureau of Statistics reported an average daily wage as of August 15, 1942, of $2.50 including board, and without board the average was $3.15.

The national survey figures on wages on year-help indicated an increase of 15.5 per cent in 1942 compared with 1941. In the case of monthly help the increase was equivalent to 25.5 percent and wages of daily help rose 19 percent.

While farm wages represent an important item of expense it should not be forgotten that farm cash income is now at record levels. The index of wholesale prices of Canadian farm products (1926=100) rose from 64.3 in 1939 to 71.2 in 1941 and for 11 months in 1942 averaged 81.3.

It is of course true that the field products index only rose from 56.5 to 66.2 during the period but the animal products index advanced from 81.2 in 1939 to 106.6 in 1942.

It must be remembered that in the early stages of this war we had surpluses of wheat, apples and tobacco which are among our chief exports. Supplies of cheese were adequate for the British market, particularly when one takes into consideration the proportion of United Kingdom's requirements that were supplied by New Zealand and Australia. Agricultural production, except for bacon, was relatively less important than getting airports, air training schools, munitions plants and motorized equipment into production. The misfortunes of war commencing in the spring of 1940 changed the picture and the shortage of shipping also affected the situation. In other words, for several months, in fact for almost a year after the outbreak of war, agricultural labour was looked upon by many as a pool from which great numbers could be drawn and despite more recent efforts to protect production of vital food supplies is still being drawn upon. If one interprets the situation properly the rural population will continue to rank as one of the more important sources of labour supply as well as contributing to the armed forces.

The National Resources Mobilization Act was passed in June 1940. Steps were taken in March, 1942 to clarify the position of the various classes of workers under Selective Service,[2] including the position of the farmer, the farmer's son and the hired workers in the age group 19 to 40. Those in these classes eligible for call under the Act were entitled to postponement of military service until further notice as long as they could show that they were engaged in farming as of March 23, 1942. They were thus regarded as an allocation to agriculture. The essentiality of such farm work may be challenged, however, by the Moblization Board and in that case responsibility for proof rests with the Board. All postponements are subject to review. Under the present Selective Service regulations, which became effective in September, 1942,[3] a farmer may enter other employment such as hunting, trapping or fishing (other than in a steam or Diesel trawler or dragger) or he may engage in seasonal employment other than agriculture without a permit for 30 days without affecting his claim to postponement of military service. If the period of employment is more than 30 days a permit from the National Selective Service is necessary. Thus in the case of work in lumbering, which may last more than 30 days, farmers are

[2] Labour Gazette, Vol. XLII, No. 4, April 1942, pp. 402–427
[3] Labour Gazette, Vol. XLII, No. 9, pp. 1018–1026.

being granted permits for longer periods and will return to farms in time for spring work.

A permit to engage in employment outside agriculture may be refused if the Selective Service officer considers the applicant essential to agriculture. There is no restriction on voluntary enlistment in the armed forces.[4]

In the early stages of the war many farmers were able to purchase new machinery. Very substantial increases in sales of farm machinery were made from 1939 to 1941, but particularly in 1940. Shortage of steel of course curtailed the amount of new machinery available in 1942.

The Economics Division survey indicated that 60 percent of the farmers hiring labour had experienced difficulty in securing help or expected that they would encounter difficulty. The increase in the number of men hired by the year is an indication of one way in which the farmer sought to meet the labour problem although the expansion in the production of hogs, cheese and fluid milk may well have resulted in an increase in the number of year round hands required. Some farmers expressed fears that production would decline. However, production in most lines of agricultural products reached record levels in 1942 despite the shortage of farm labour. It is true that in some sections of Western Canada the grain crop is not all harvested but this was due to bad weather during harvest rather than an actual shortage of manpower. In Eastern Canada the weather was favourable throughout the season. Everywhere farm families worked longer hours. They worked more with their neighbors. More effective use was made of machinery through co-operation and an increase in the amount of tractor and combine work performed at custom rates. The townspeople helped wherever possible. The over-all picture is one of greatly expanded production of feed grains and livestock.

The Dominion Government and the Provincial Governments have endeavoured to assist in the mobilization of farm labour and it seems desirable to refer briefly to some of these undertakings.

In the Province of Ontario, County Agricultural War Committees have been set up which help in the mobilization of men and equipment. The Ontario Government has organized a Farm Service Force which has been of material assistance to farmers in the

[4] Subsequently increased to sixty days.

Province. In its initial stages it was set up to mobilize high school students for farm work but has since included other workers. There are seven brigades.

The Farm Cadet Brigade enrolls all young men from 15 to 18 years of age inclusive, to be used chiefly on dairy farms or in mixed farming.

The Farmerette Brigade, which enrolls all young women 16 years old or over in high schools, normal schools, universities and other educational institutions, including the teachers, is for work in fruit and vegetable production.

The Women's Land Brigade enrolls all young women not in educational institutions for work on general farms, poultry and dairy farms.

"The Boys of the Old Brigade" includes middle aged or older men such as retired farmers or farm hands who may be available for year round work on farms.

The Holiday Service Brigade, including those who may spend a holiday period of from one to three weeks at farm work, those who will devote one day a week and those in smaller centres who may be able to spend from one to three days per week to help in harvesting crops.

The Children's Brigade—children on farms who may enroll to assist in production, particularly berry picking, weeding and garden work.

The Farm Girls Brigade enrolls all farm young women up to 26 years of age.

A Garden Brigade has been formed among urban residents and steps are under consideration for organization of all farmers and farmer's wives in Special Brigades.

In 1941, 23,041 placements were made and in 1942 upwards of 54,000 placements have been made. The Ontario Farm Service Placement officers work in cooperation with the district employment officers.

Provision has been made for the organization and supervision of camps in fruit and vegetable districts. The camps were set up to accommodate 60 persons and are largely under the supervision of the Y.M.C.A. and the Y.W.C.A. The camp staff consists of a director, cook and three assistants. A Labour secretary is appointed to distribute workers where required. The farmer telephones his requirements for the following day to the secretary during the

evening. Eleven camps were in operation during 1941 and a larger number were organized in 1942.

The Dominion Department of Labour has entered into an agreement to provide financial assistance in carrying out plans for the Ontario Farm Service Force. Agreements have also been made with a number of other provinces where similar activities have been developed.

To some extent Japanese born in Canada and placed under surveillance have been utilized in the sugar beet areas in Alberta, Manitoba and Ontario, and discussion is under way in respect to the utilization of Italian prisoners of war as well as certain internees. While all these proposals regarding enemy aliens involve some difficulty the number in these groups who will be engaged in farm work will probably increase in 1943.

A recent proposal is that labour may be brought in from the British West Indies for work on crops such as sugar beets, vegetables and fruits.

An experiment was carried out in Western Canada whereby an international exchange of combines and combine crews was arranged. The exact number of combine crews with their equipment who entered Canada is not available but it is believed to have been more than one hundred. While problems of exchange, immigration regulations and other details had to be ironed out it is thought that this plan holds considerable promise for the future.

Along similar lines was an arrangement whereby a large number of potato pickers from New Brunswick were able to help harvest the Maine potato crop. Assistance of this kind was also made available from Quebec.

Prior to harvest, agitation was begun for the release of soldiers for a sufficient period to help get the crop off. Some concessions were granted but under rather rigid conditions and the number available was thus limited.

To assist with the grain harvest in Western Canada the grain harvesters' excursion was revived. Farmers who were able to get away from farms in Ontario and Quebec were encouraged to go West. University students physically fit, particularly those who had farm experience, were granted leave to help with the harvest. Certain guarantees with respect to work were made and transportation was provided. About 6,000 men were asked for originally but subsequent revisions indicated a smaller number were needed and

about 5,000 actually went to farms in Western Canada. Although not without some drawbacks, this plan worked fairly well. It was organized rather late to be of maximum benefit.

One other transfer of farm labour should be mentioned. Farmers, farmers' sons and farm labourers who can be spared from their home farms have been encouraged to engage in lumbering and mining operations during the winter months. Some of these men are, of course, accustomed to this work, having gone to the woods more or less regularly in other years, but about 100,000 have been recruited for work in the woods. All are expected to return to farms before spring work starts in 1943.

The farm labour shortage in Canada has been felt most acutely on dairy farms and seasonably in sugar beet, fruit, and vegetable production. Canadian farmers were able to meet the situation in 1942 with the aid of voluntary transfer of labourers but if the production goals recently established are to be achieved other sources of supply will have to be found. Although farm women have taken a large share of farm work and women have played a large part in fruit and vegetable harvests, considerable increase in the use of women may be expected in 1943. Men engaged in non-essential industry who have had farm experience as well as men rejected for the armed forces should be made available for farm work. Consideration may need to be given to transfer of farmers and farm families from areas in which little surplus production of food is possible. Curtailment of machines available to replace human labour means better organization of the labour force is now imperative and steps to facilitate better mobilization are being taken by Selective Service officers.[5]

[5] Since this article was written, an eight-point interpretative letter has been sent to the chairman of each of the thirteen Mobilization Boards in Canada. It is now made clear that essential workers in agriculture are being encouraged to remain on farms although they may still volunteer for services in the armed forces. In cases where workers can be spared in off-seasons, they are encouraged to seek seasonal employment in lumbering, logging, forestry, fishing, coal and base-metal mining. By so doing, they will not lose their status as agricultural workers provided they return in the spring for example. Agricultural workers are to be discouraged from accepting employment outside agriculture except seasonal work as indicated in the foregoing. It is also made clear that the farm workers essential in their present capacity are entitled to receive postponement of military service until further notice. Unlike those in other industries, they are not required to furnish proof of their essentiality. It may however be challenged by the Mobilization Board. The interpretative letter suggests that farm workers not essential on a specific farm may be given three months to engage in essential farm work on another farm.

FARM LABOR SITUATION IN IOWA*

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THE movement of labor out of agriculture and into the armed forces and into industry has proceeded at a rapidly increasing rate since the early days of the national defense program. In spite of a decrease in the number of farm workers, Iowa farmers produced record quantities of crops and livestock in 1942. But this was not accomplished without exceptionally favorable weather and more work by farm operators and their families.

The first real signs of a farm labor shortage appeared in the later part of the 1942 crop season, when farmers began experiencing difficulty in hiring labor during the periods of peak demand. The seasonal labor shortage on the whole was not acute, yet it did require limited action of a sort not common in peacetime. In some communities city workers volunteered for farm work and while not as efficient as the regular farm laborer, they did accomplish the job. High school and college students were called upon in other areas and performed the work with a tolerable degree of success. Through more efficient use of available machinery in particular communities, farmers who were suddenly faced with a shortage of labor were able to hire the services of corn pickers and other machines. An increase undoubtedly occurred in the use of exchange labor. Local, government employment offices greatly facilitated a more efficient use of the available labor supply. In some cases local draft boards gave short-term deferments to enable the affected workers to complete the seasonal work.

With the passing of the 1942 labor peaks, much of the farmers' concern over the growing scarcity of labor subsided, indicating that the bulk of the difficulty was caused by a depletion of the supply of seasonal labor. The present period is one of relative calm before the storm. The arrival of spring will bring a new crop season with a greatly reduced supply of seasonal labor.

Iowa agriculture is dominated by the family size farm. The typical or average unit is organized around a core of operator and family labor which supplies nearly the whole of the year-round labor force. The livestock system requires year-round attention

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and is largely dependent on the supply of operator and family labor. Seasonal labor peaks during the spring, summer, and fall months require some supplementary labor which is usually hired by the day or month. Recent expansion of the livestock enterprises on the bulk of Iowa farms has reduced the slack in the year-round labor force and has also tended to increase the dependence on hired labor for seasonal crop work. A part of the increased year-round labor needs has been offset by longer hours and harder work by the operator and family labor, but another part has found its effect in increased seasonal needs for crop work which to the typical farmer means more hired labor.

On the family size unit the loss of year-round labor to the armed forces and industry has not yet seriously affected the volume of livestock production. Some farmers who have experienced the loss of a son have had to work harder. It has perhaps caused some inconvenience to other members of the family who must not bear a larger share of the work, but there has been no appreciable effect on total output. The large majority of the family workers on the typical Iowa farm were not subject to draft in 1942. In 1943 the solution to the labor problem on these units is to be found largely in supplying needed seasonal labor during the periods of heavy demand for crop production.

Significant exceptions to the typical farm situation are evident. There are the large farms, in terms of labor input, which depend upon year-round hired labor and where additional supplementary labor is hired during the crop season. It is on the larger units where the greatest amount of family labor is employed and where a larger proportion of the family labor has been of draft age. Many of the larger farms are faced with an acute shortage of year-round labor as a result of the draft and highly paid industrial employment opportunities. Substantial increases in farm wages have not been sufficient to reduce appreciably the flow of labor into industry. Apparently the greatest concern at present over the labor shortage comes from those who are faced with a shortage of year-round hands. It seems probable that unless positive steps are taken to insure these farmers of an adequate supply of year-round labor, their livestock production will be severely curtailed in 1943. On the other hand, present indications suggest that the reduction in year-round labor which is in prospect for 1943 will not adversely affect livestock output on the majority of Iowa farms, providing

seasonal labor demands can be supplied. This reservation is important since without adequate seasonal help farmers will not produce a volume of livestock sufficient to fully employ the operator and family labor throughout the year.

The second exception to the typical farm is the small unit where the supply of operator and family labor is more than sufficient for the year-round livestock work and practically sufficient on many farms for the seasonal peaks arising in crop production. On these farms the farmer himself constitutes the big source of labor. Only a small amount of labor is hired and this generally by the day. Output per worker is low. In the main this is due to three factors: (1) a lack of sufficient crop and livestock work to keep the available labor supply fully employed; (2) a lack of mechanization; and (3) wasted effort, untimely performance of operations and a lack of general proficiency. On many of these farms there apparently is room for significant production expansion, but more effective use of labor will require positive action by providing these farmers with capital facilities, proper incentives and a minimum of managerial assistance. Others in this group can contribute most to the war effort by helping out on neighboring farms where the labor shortage is severe.

If Iowa production is to attain a maximum in 1943, the farm labor problem must be attacked in an organized fashion by (1) providing seasonal labor through local recruitment programs such as were begun in 1942, (2) by providing the larger farmers who are faced with an acute shortage of year-round labor with replacements from other areas or by deferment of local workers, and (3) by providing "underemployed" farmers with the necessary facilities to obtain effective use of available labor.

OHIO FARM LABOR SITUATION

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IN OCTOBER 1942 a study of the farm labor situation in Ohio was conducted by the Department of Rural Economics. One phase of this work involved the study of 477 farms located in 16 typical communities in widely separated sections of Ohio. In each of these areas all the farmers in a solid block, comprising about 30 farms, were interviewed, so there was no bias in their selection.

There was approximately 8 per cent less manpower on these farms in 1942 than in 1941. This reduction, amounting to an average of 1.8 months of man labor per farm for the year, does not take into account the longer days and the harder physical work which the operator and the members of his family put in during the past year. A large part of the reduction in manpower on Ohio farms was due to decreases in the numbers of regular hired men and male members of the operator's household between the ages of 18 and 45. These reductions were only partially offset by more work on the part of farm women, farm children of school age, and older men in the family such as the operator's father.

Favorable weather was an important factor in the larger agricultural output attained in 1942 in spite of reduced manpower. Production plans for 1942 were made when the farm labor supply was still quite adequate and when there were prospects for further increase in the prices of farm products.

As the harvesting season of 1942 progressed, more farmers made use of labor-saving machinery, such as pickup balers, combines, and corn pickers. More farmers discontinued cutting and shocking corn, a practice ranking high in its labor requirements. The neighborly practice of exchanging labor and machinery was increased and can be further extended. Another way in which farmers met the labor shortage was simply by neglecting the maintenance work on buildings and fences; since man's physical endurance is limited there was no alternative.

In 1942 about one-half of the total labor on Ohio farms was performed by the operator, one-fourth by other family labor, and one-fourth by hired labor, including both seasonal and regular help. Seasonal hired help was employed by nearly twice as many farmers as kept a regular hired man on a monthly basis. More farmers

hired seasonal labor and smaller numbers hired regular hands in 1942 than in 1941. On many farms seasonal labor was the only help needed to supplement the labor of the operator and his family. Furthermore, seasonal help was often the only kind that was available in 1942. Regular hired labor was more important in the aggregate, however, than seasonal labor.

An enumeration was made of all regular farm workers, including the operator, members of his family who were available for any farm work, and regular hired men. This showed that 6 per cent of the farms had more workers in October, 1942 than a year ago, 70 per cent had the same number of workers, and 24 per cent had fewer workers. On the entire 477 farms there was a net loss of 99 workers, or about 1 less worker for every 5 farms. The most critical losses were the 23 per cent decline since October, 1941 in the number of male family workers (other than the operator) between the ages of 18 and 45, and the 36 per cent decrease in the number of regular hired men. For every 10 farms which had regular hired workers in October 1941 there were only 7 farms with such labor in the fall of 1942.

The farm labor force was reduced not only in numbers but also in experience. In October 1941 these 477 farms had a total of 214 regular hired men. During the 12-month period ending October 1942, 138 of these hired men left the farm and only 60 new regular hired men were recruited. Of the latter number only 38 had come from other farms, 9 had been working at industrial or other jobs, and 13 had been on WPA in 1941 or were unemployed because they were ill or too old to work in industry. Only about one-half of the farmers' sons who went to the armed services or to industry have been replaced. These replacements have often been by farm children not old enough to work in 1941. A number of farm women also helped with the milking or with the field work for the first time in several years. There was a rather general feeling that farm women were already carrying a sufficiently heavy work load. No great increase in their participation in farm work can be expected.

About seven farm workers went into the armed forces during the year for each six who left for industrial employment. There was some migration of industrial workers back to the farm, so in the past year it appears that the net loss of farm workers to industry has not been as large as the number who left the farm to enter the armed services. Industry began to draw workers away from the

farm long before the enactment of the selective service act. Hence in the past two or three years, industry with its attractive wages and hours of work, has drawn much more manpower from the farm than have the armed services.

In October, 1942 about 19 per cent of the farms had workers to whom induction into the armed services appeared imminent. These farms were about one-third larger than the average of the entire group of farms studied, both in crop acreage and in livestock numbers. The young men, many of whom have had one or two deferments, had not left for higher industrial wages because they were needed on the home farms. Agricultural production in 1943 will depend in no small part on the action which local draft boards take in cases comparable with these. The recent changes in selective service regulations should be of help in preventing further depletion of the manpower on farms. However, the movement to industry will continue unless means are taken to control it.

At the time of the survey, uncertainty about next year's labor supply loomed large as a factor in 1943 production. Thus while 31 per cent of the operators were uncertain about next year's production because of labor shortages or the impending draft of sons or hired men, 10 per cent said they would produce less than in 1942, 46 per cent said their production would be the same, and only 13 per cent said they would produce more. In general, it was the operators of larger than average farms who are more dependent on hired labor who foresaw a smaller output in 1943; on the other hand many operators of small farms who hire very little labor believed they could produce more next year. But will the increased production on the small farms be sufficient to offset the decreased production of the larger farms? It is apparent that many small farms still have a surplus of farm labor. These farms are generally lacking in capital and farm equipment. How to more fully utilize the labor resources of such farms is one of the problems to be solved before farmers attain their 1943 production goals.

FARM LABOR AND FOOD PRODUCTION

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THE farm labor situation was probably the New York farmer's most aggravating problem in 1942 and it appears that it will continue to plague him for some time. In spite of this he was able to produce record quantities of food in 1942. It is generally agreed that production was curtailed very slightly because of labor shortages.

For more than 20 years, births on farms in the United States have exceeded deaths by nearly one-half million annually. This has been accompanied by a downward trend in farm population. The result has been a net migration of people from the farms. During the depression years of the 'thirties, the normal migration of persons from farms was retarded and a surplus of farm workers accumulated. Farmers became accustomed to an abundance of help at low wages and naturally found it difficult to adjust their operations to a smaller supply at higher wages.

Part of the adjustment to a reduced farm labor supply took place in 1940 when industrial employment began its rapid expansion. Fortunately, New York farmers purchased a substantial quantity of new machinery in 1940 and 1941. A survey of nearly 900 New York farms in 1942 indicated that about one-third of their tractors and of some other important pieces of equipment had been purchased within the past two years. Much of the new purchases resulted from a ten-year accumulation of needed repairs and replacements because of the depression. However, from the standpoint of machinery, New York farmers are probably better prepared to face a period of machinery shortage than they have been in many years. Many farmers are better able to do their work with a reduced labor force than they have ever been.

New York farmers have lost large numbers of their skilled hired men to industry and to the armed forces. It has been estimated that for every one lost to the armed forces, three have been lost to industry. In some instances, these workers have been replaced with less experienced workers; in others, they have not been replaced. There are several reasons why farmers were able to produce at record rates under such handicaps. Favorable weather conditions accounted for much of the large production.

The typical dairy farm in New York is a two-man operation, the

operator contributing one-half, members of the family, one-quarter and hired labor, one-quarter of the total labor force. This organization provides a flexibility not found in most types of business operations. Seventy-five per cent of the total labor force, made up of of family labor, may be stretched, either through the operator or members of the family working longer hours or by bringing additional members of the family into the labor force. This helps to compensate for less hired help or for less efficient hired help.

Many farmers have been forced to omit some of the work ordinarily done and to concentrate on only the most essential jobs. Such maintenance jobs as repairing fences and buildings and cutting brush have suffered.

National Policy on Manpower

In the successful prosecution of a war, the most essential needs for manpower might well be classified as follows:

1. Persons for the armed forces.
2. Persons to supply war equipment to the armed forces and to our allies.
3. Persons to produce food for our civilians and armed forces and for civilians and armed forces of other countries.

Our armed forces have been supplied with manpower through selective service and voluntary enlistments. War industries have been able to pay practically whatever wages were necessary to insure them adequate manpower. Few people would disagree with this method of quickly building a well-equipped fighting force. This we have done. Such a policy, if allowed to proceed indefinitely, would unbalance our war effort because of the eventual reduction in food supplies. Agriculture, along with less essential industry, has had to compete for manpower with the armed forces and war industries—an impossible situation. The result has been a substantial loss of skilled workers from farms.

It has quite properly become the obligation of someone to appraise the entire war effort and decide on a balanced allocation of man-power between these three essential elements. There is not sufficient man power to satisfy all three. The result must be a compromise. Our contribution to the war effort must be a compromise on whether or not to supply more men, more tanks and aeroplanes, or more food. Under certain circumstances, any one of these may be more effective than the others.

Apparently those in authority are now thinking that food will

play an important part both in keeping our war industries producing at a high level, in feeding our fighting forces well and also in feeding our allies, their armed forces and countries being occupied. We are told that we hope to export nearly one-quarter of our 1943 food production. For a country which has long been on a net import basis for food, such a hope is optimistic to say the least. Farmers are being asked to exceed their 1942 production in 1943. Those who honestly expect that this will occur must fail to realize that the record production in 1942 was the result of the most nearly ideal weather conditions in years, together with the accumulated effect of five previous years of high production. Normal weather in 1943 will result in a substantial reduction in food and feed crop production compared with 1942.

A nation whose agriculture has been geared to feeding only its own 130 million people cannot go very far in feeding many millions of other people and especially with animal products. Conceivably, we might change our food standards to such an extent that we consume principally cereal foods. Under such circumstances, our agricultural production could be used to feed our own population and possibly an additional 200 million. We would approach such a situation if we undertook to feed any large portion of the world's population. Such an adjustment on our part would of necessity come about slowly and with considerable resistance.

How Can Production Be Maintained in 1943?

If it is our national policy to produce food in 1943 at the 1942 levels, there are several factors which should be considered. It would seem that one of the most obvious steps would be to remove all acreage restrictions. Wheat, now considered a surplus food, will eventually be a highly prized food here at home as well as for export. We cannot hope to greatly expand pork production without expanding corn production. While the weather will be the biggest factor in determining corn production in 1943, we might help insure a large production by increasing the acreage planted.

Farmers are faced with a shortage of labor in 1943. This situation can be alleviated in a number of ways. Farmers on good farms should be able to pay even higher wages to keep good hired men. In New York, farm wages are already about 75 per cent higher than when the war started in 1939. Nevertheless, many farmers feel that farm incomes will justify even higher wages if necessary. Even though the intent may be to prevent a further increase in

farm prices, it seems probable that they will rise and permit farmers to pay higher wages. A monthly wage of $100 plus farm privileges is not now uncommon in New York. To many hired men with families, this compares favorably with a job in industry paying $50 to $60 a week, but requiring that they drive 20 or 30 miles to their work.

If farmers on good farms are permitted to buy a limited amount of new machinery and to get sufficient repairs to keep their old in operation, a considerable amount of the difficulty due to labor shortages can be alleviated. The machinery problem is probably as important if not more important from the standpoint of food production than is the labor shortage. They are of course interrelated.

Some have suggested that agricultural workers and operators from the less productive farms might be more productive if they were hired men on larger, more efficient farms. This is undoubtedly true but from a practical viewpoint, it offers little hope of relieving the situation in the North East. Most operators on such farms live within a reasonable distance of some war industry. If they changed at all, they would probably prefer the relatively high wages in industry to hired men's wages on another farm. Many can still live on their farm and work in industry and have the advantages of both. Much of this adjustment has already taken place in the North East and has apparently decreased food production but little.

It appears that the drawing of skilled manpower from farms has gone far enough if not too far, consistent with our national policy of food production. Steps should be taken to retain present key-workers and replace those where production is threatened. The deferment of workers by selective service and the encouragement of industry to avoid hiring agricultural workers, can be effective in this direction. It would probably be well to go further and convince the general public, as well as young farmers, that it is patriotic to work on a farm at this time.

Every effort must be made to help recruit farm labor during the period of scarcity. Aid will be most needed and useful, but also most difficult, in the recruitment of regular rather than seasonal or temporary help. Both are important. It seems probable that sufficient harvest and temporary help can be obtained in most areas to handle the peak loads of labor for whatever operations can be handled by the supply of regular and family help throughout the year.

HOW FARMERS ARE MEETING THE SCARCITY OF LABOR

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SINCE the large amount of labor that has been drawn from farms in Southeastern United States adds new importance to the labor problems, farmers are experiencing difficulties in planning their farm operations to carry them to completion. Because of the labor intensity on the type of crops grown in the commercial areas south of the Ohio River, the problem of obtaining sufficient farm labor may be more acute than in northern regions. Standardized methods of production for enterprises such as tobacco and cotton are labor consuming; the reason being that a surplus of available labor has predominated for decades and labor saving machines substituting for hand work have not been developed. These crops are financially important and form the "core" of farm organization on the majority of farms.

Farmers in the past have been able to easily hire, at moderate prices, underemployed or unemployed labor for a part of a season or for relieving a short but critical peak period. Consequently, adoption of labor saving practices has been naturally and normally slow. Such sources of labor do not exist in the important producing areas any longer.

After experiencing the 1942 fall harvest period, using fewer laborers with less skills, trying to obtain men with wages that could not compete with industrial pay, working longer hours, and doing many other things, farmers are a bit apprehensive about the reflections of future operations. This apparent confusion among farmers presents a significant challenge to agricultural leaders to encourage farmers to tackle seemingly insurmountable obstacles.

The need for laborers is both seasonal and regular. The farms employing year or regular hands are facing the prospect of using labor with fewer farm skills, less mechanical ability and less physical prowess than they have been accustomed to in past years. These facts they will consider in the production plans for the coming year. Responsibility for producing the number one crops for prosecution of the war, food (livestock and human), fiber (mostly hemp), and oil (soybeans and peanuts), has been accepted. However they recognize that they have a problem of proportioning the

acreages of each war crop to provide a fairly uniform demand for labor and other resources available.

Seasonal labor is paramount on crop speciality farms. These farms and others that have few livestock do not have a uniform demand to justify hiring year hands. The seasonal peaks on crop speciality farms are of consequence because of the large amount of hand work that must be done in a short time. In the tobacco areas 50 to 70 per cent of the productive work spent on crops alone is for tobacco.[1] Approximately 80 per cent[2] of 300 hours per acre for tobacco is hand work for which labor saving machines are not available. Consequently, obtaining labor to meet the seasonal distribution of these requirements and the competition for attention by other enterprises, challenges the resourcefulness of the farmer.

Meeting the Problem

No one solution to the labor problem is yet apparent. Rather relief will come from making practicable use of the existing resources. The following lines of action have been undertaken or may be necessary before the end of 1943.

Closer neighborhood cooperation to exchange labor and pool resources will be imperative. Since most of the labor problems will be solved locally this is significant. Exchanging labor for labor, or labor for machinery use, or "teaming up" for certain operations is not a new idea, but still a good one. Possibilities of exchanging labor between farmers with different enterprises between small and large operators, and between tenants on the same farm is being explored. To encourage these community movements farmers are asking for able leadership and dissemination of accurate information depicting seasonal labor requirements and exchange values for labor, power and equipment.

Exchanging labor also has its drawbacks. Farmers, usually those with medium to large acreages hiring regular labor, often have a close succession of pertinent jobs that cannot be delayed. To exchange labor on these farms usually means taking a longer time for each job.

The possibilities for exchange among farmers in a locality or community having a homogeneous specialized pattern of crop por-

[1] Unpublished data, Department of Farm Economics, University of Kentucky, Lexington.
[2] Ibid.

duction decline with an increasing inflexibility of the timeliness of operation. For example farmers growing the same type of perishable crops could hardly exchange. However, to the extent that planting dates and varieties could be varied to affect seasonal distribution, exchanging could function.

Employment of ingenuity to meet the problems is more apparent this year than in the past. Farmers are critically examining the function and necessity of each method and job. Many revisions of methods and development of new techniques and labor saving devices will occur. Such innovations of methods will be wholesome as the availablity of labor in the past has prolonged out-moded habits.

Full and careful utilization of existing farm power and equipment is being considered. Tractors and complementary equipment substitute directly for labor. When considering the present use of power in crop production and projecting to find how much labor requirements could be reduced if all the possible work were done by power machinery, it was found that tobacco requirements could be reduced approximately 10 per cent;[3] not considering the use of mechanical corn-harvesters, corn requirements could be reduced 30 to 35 per cent. Labor requirements for small grain could be reduced 30 to 40 per cent and for hemp seed 20 per cent. Although these percentages vary by areas, and represent an accomplishment that is not possible, they emphasize the non-importance of power machinery on crops requiring hand work and the contrary on other crops adaptable to power machinery use.

Custom power outfit operators have not increased at the same rate as tractor expansion. Under the present emergency such operators are significantly important. One such power outfit with a tractor, plow, disk, pick-up baler, combine, and mechanical corn-harvester, could in one year do three to five times as much work as farm tractors comparing their present use on farms.[4] Further, such an outfit, costing about $4,000, could function night and day for breaking and disking. Present restrictions on farm machinery will prevent many such outfits from having a full complement of equipment and they will also limit the expansion of new operators.

Surplus labor areas and supplies in local communities are being

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[3] Ibid., p. 306.

[4] G. B. Byers and Ernest J. Nesius, Recent Farm Power Costs. Ky. Agri. Exp. Sta. Mimeo. Farm Economics 113, nine pages, Lexington, Ky. The days of tractor use in the Lower Ohio Valley and Pennyroyal averaged 52 days per year.

studied to make the best use of them. In the mountains and other small farm areas underemployed labor exists in significant quantities. Although considerable progress has been made in utilizing this reserve,[5] many problems yet lack a satisfactory solution. Problems such as acquiring new skills, getting the employer and employee to understand the personal and social habits of each other, and housing facilities are stumbling stones hindering overwhelming success.

Because of the multitude of skills necessary, workers from these areas are not readily adaptable to assuming the responsibilities of a month or year hand. However seasonal peaks for crops requiring hand work can be significantly ameliorated by using such labor.

Possibilities for using non-farm youths to work on farms, during vacation periods, are being studied by county labor committees. Experiences in Maryland[6] and Georgia[7] indicate that city youths can help a great deal. In these states the skills were quickly learned, and the work well done when groups were supervised. A problem of attitude will have to be met, convincing youths that doing farm work is wholesome, profitable and patriotic. The employers will also need a little coaching to soften their resistance to the inadequacies of the town or city youth.

Using townsmen offers some possibilities. Townsmen are usually otherwise employed and the situation would have to be rather serious before they could justifiably be asked to leave their own businesses. Experiences in Minnesota[8] and Georgia[7] indicate the willingness of townspeople to help farmers out of a critical situation. The help provided by these people, although of significance, is not as effective as a more constant supply of labor.

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[5] The United States Employment Service cooperating with the Farm Security Administration have succeeded in transferring 3,000 workers from Eastern Kentucky to farms in Eastern and Northern U. S. A.

[6] E. I. Oswald, High School Student Farm Labor Program in Maryland. Maryland Exp. Sta., College Park. Typewritten statement.

[7] E. C. Westbrook, letter to author. Georgia Exp. Sta., Athens.

[8] Minnesota Townsmen Harvest Crops to Solve Labor Shortage. The Courier-Journal, Louisville, Kentucky. September 11, 1942. Section 1, p. 20. Newspaper article.

AGRICULTURE WHEN THE WAR ENDS

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IN RECENT weeks there has been a noticeable increase in the discussion of post-war problems. This no doubt is a reflection in part of the improving military situation in favor of the United Nations, both in the Russian and African theatres as well as in the Southwest Pacific. It also has been occasioned in part by the release of the long awaited Beveridge Report in England, by Queen Wilhelmina's speech on the Netherlands Commonwealth of Nations, and by numerous speeches and developments in the United States.

Everywhere and among all groups apparently there is great interest and keen speculation as to what the situation will be when the war ends, and as to the kind of post-war world we are going to have. There seems to be a genuine interest, if not an underlying anxiety, on the part of farmers and farm people, particularly, with respect to this. They see the tremendous outlays for war purposes, the rising public debt, the large increases in production being called for, and they wonder what it all means—where we are headed—how the whole thing is going to end. Next to winning the war itself probably no question is of greater concern to them than this.

Situation After the War Contingent Upon a Number of Developments

Obviously, it is not possible for anyone now to say just what the actual situation will be when the war ends. There are too many unknowns and imponderables in the picture to permit a categorical answer to the question. What the actual situation will be will depend upon a number of developments.

It will depend, first of all, upon how long the war lasts and what happens during the remainder of the war period. It will depend also upon what policies we follow in liquidating the war and restoring the peace—upon how rapidly we demobilize and convert back to peacetime industry—upon how successful we are in maintaining national income and employment and in preventing inflation and its counterpart, deflation—upon the sort of fiscal and commercial policies we follow—upon the degree and kind of international political and economic collaboration we pursue—in short, it will de-

pend upon the kind of post-war world we are going to have. We thus can only speculate about it—we cannot give a final answer.

"When the War Ends" Defined

In discussing the problem we shall need, at the outset, to define the limits of the period to be covered. Obviously, the phrase "when the war ends" is susceptible to more than one interpretation. It might be taken to mean the situation at the moment hostilities cease; the situation the first 6–12 months after the war ends; or it might be given a broader interpretation and made to include in addition the period five years or more beyond the end of the war. I shall assume that it is this last or broader phase of the problem that the discussion is supposed to cover.

In order that the discussion be as direct and definitive as possible, it is desirable to break the post-war period into sub-periods. Three such will be distinguished: (a) When hostilities cease, (b) From the end of hostilities until the accumulated demand for durable, semi-durable, and consumer goods has been met, and (c) The post-war period proper.

The overall situation that will prevail and the pattern that agriculture will assume in each of these three periods presumably will vary considerably. Just what likely will be the nature and magnitude of these developments is the primary problem around which we shall need to center attention.

Situation When Hostilities Cease Will Be Conditioned in the Main by Developments During Remainder of War Period

Let us begin the analysis by considering, first, what the situation will be when hostilities cease. In doing so it will not be necessary to forecast just when the war will end. But it will be desirable to make certain assumptions as to how it will end. In this connection, it seems reasonable to assume that the war will not end abruptly—rather that it will come to a close first in the European theatre—in another six months to a year or more later in the Pacific. Regardless of when hostilities cease it seems clear that the situation prevailing at that time will be determined in the main by developments that take place between now and the end of the war period.

What is likely to be the nature of these developments? Will there be a further intensification in production of the same crops, live-

stock and livestock products that has been under way for the past year or two, or will there be a slowing down or a possible reversal in the trends in some of them? Will the requirements for agricultural products continue to rise—if so, for what purposes, in what magnitude, and for what products? Can we step up production to keep pace with these requirements or will the scarcity of labor, fertilizer, machinery, and other materials prevent such increases? To what extent will it be necessary to economize on supplies on hand or in prospect by the instituting of consumer rationing programs to meet these requirements? Are we now at the peak of our war production effort—if not, how much further can we be expected to go? These are the type of questions we shall need to consider in estimating what the probable situation will be and the level of production, prices, income and debt we will have reached when the war ends.

We clearly are not now at the peak of our war effort. We are continuing to convert civilian industry to war purposes. to expand plant capacity, and to step up war expenditures. We are now spending for war purposes at a rate of around six billion dollars a month. This is expected to increase possibly to eight or nine billion dollars a month at the peak of the war effort, which probably will not be reached until 1944. It also is expected that at the time of the supreme war effort employment will have risen to 54 or 55 million as compared with an estimated 52.5 million employed in July 1, 1942, (exclusive of the number in the military service). With these tremendous increases in expenditures, in employment and production, the national income also will further increase. Some estimates put it as high as 140 to 150 billion by 1944.

Along with these changes are coming very rapid increases in our military forces. We now have more than four and one-quarter million men under arms in the Army alone—by the end of 1943 this number is expected to increase to seven and one-half million, and reach eventually possibly an even higher figure. If the men in the Navy and Marine Corps are added to this, the total becomes even greater.

We also undoubtedly will be called upon to supply increased lend-lease shipments of food and other products. With the large losses of territory suffered by Russia, much of which was their most productive agricultural land, and the sharp drop in United Kingdom imports as a result of aggression in the Pacific area and

elsewhere, there unquestionably will be a need for additional supplies of agricultural products for lend-lease. The extent of the actual increase in supplies that will be sent abroad will be determined primarily by the availability of shipping. The need unquestionably will exist, the problem will be to get the food and other products to the points where they are most needed.

An additional demand will arise in connection with second-front operations. As we progressively retake present occupied territory, we shall be called upon to feed and clothe the repatriated peoples. We also shall need to consider the relief needs of these as well as of the under-nourished and starved peoples of other countries when hostilities cease, and make provision for them between now and when the war ends. We, likewise, shall need to take into account possible further losses of territory to the aggressor nations, and build up reserves against such possible developments; also to build up reserves to guard against possible decreases in yield as a result of drought. We have been blessed now with a series of good crop years, obviously, we cannot assume that such will continue indefinitely.

With these various demands and requirements in prospect, we clearly shall need to put continued emphasis upon the production of the essential war crops we have been encouraging—upon dairy, poultry, and meat products—upon oil crops, certain vegetable and canning crops, dried peas and beans; long staple cotton as well as hemp for fiber. I would assume, therefore, that the pattern of agriculture for the year ahead on the whole will not vary a great deal from the pattern that production followed in 1942. Increases in some items already have been requested in the announced 1943 goals, and greater selectivity in production also is sought. But these changes are more in the direction of greater intensification than in a change in the pattern itself. Whether the same levels of production are achieved, or whether there will be increases in production, however, is one of the unknowns that we cannot now determine. It will depend, in part, upon weather and, in part, upon how successful we are in solving some of the bottlenecks with which we are faced, particularly of manpower.

In looking on ahead into 1944, due to the further dwindling of labor and scarce materials, we probably will find it necessary to exercise an even higher degree of selectivity in our production than is proposed in 1943. We may be forced to use labor and scarce

materials only in the production of those products for which there is absolutely an essential need.

Even with such increases and adjustments in production it seems highly improbable that we shall be able to meet the requirements in prospect from production alone. If these requirements are to be met (and it is extremely important that they be filled) about the only other alternative open is to restrict domestic civilian consumption. Apart from the savings out of the total supply that would result from such action, such a program also would assure a more equitable distribution in consumption among the different income groups and would render less difficult the maintenance of price ceilings. The maintenance of such ceilings, at best, will be very difficult unless we develop more effective measures than are now in effect for siphoning off the excess purchasing power that prevails in our economy.

It seems clear, therefore, that we still face some rather important adjustments ahead during the remainder of the war period. I would assume that the pattern of agriculture we reach in 1944 will characterize, in general, the pattern for the remainder of the war, even if the war continues beyond this date. This does not mean that there will be no further adjustments—there undoubtedly will be such in certain items. But, in general, the pattern reached at that time should continue for the remainder of the war period and, hence, also should characterize the situation when hostilities cease. This is true, primarily, for the reason that shortages in strategic materials, machinery and equipment, transportation, storage, and processing facilities, and, above all, in manpower will be such as virtually to preclude further expansion in production. These shortages and bottlenecks also will preclude much, further shifting between enterprises beyond what is effected between now and that time.

Summary and Forecast of the Pattern of Agriculture When Hostilities Cease

Thus, to summarize, I would assume that the situation at the end of hostilities would be about as follows:

We shall find ourselves geared to quite a high level of production—higher in certain items than it is today—notably in hogs, beef cattle, poultry and possibly dairy production; also higher in feed grains, hemp, long-staple cotton, and certain of the vegetable crops. Reserves also will

be high, particularly for the lend-lease products. Stocks for most product, in general, probably will be considerably above levels usually maintained during peacetime. We also will be possessed with an agricultural plant, possibly somewhat impaired, but still capable of continued production at high levels.

Both prices and income will be high, probably higher than today. Land values, on the other hand, although possibly somewhat higher than today, still will be materially below levels prevailing at the end of World War I.

Manpower then gainfully employed in agriculture will be in much better balance with the non-agricultural group than in previous years. It, however, will be at a relatively low level—probably at the lowest level since the turn of the century, or at least for the past twenty-five years, but still ample to produce all the supplies normally needed.

Farm units also, on the whole, possibly will be more nearly economic as a result of consolidation and enlargement of units, particularly among the lower income bracket farms during the war.

Machinery and equipment on the other hand will have depreciated and certain machines will be in short supply, but there will be available manufacturing facilities in such ample capacity as to compensate for these deficiencies in short order.

Marketing methods, processing facilities, and capacity also will have changed a great deal—new plants and new techniques for processing and dehydration particularly will have been developed and will be ready for extensive use; but additional facilities and further changes will be needed to result in an adequate and efficient marketing system.

On the non-agricultural side, industry will be geared still to wartime production, but faced with a large accumulated demand for durable, semi-durable, and consumer goods and with a greatly expanded and efficient plant awaiting conversion back to peacetime production. In this connection, the potentialities are substantial. We will emerge from this war with capacities for making metals, plastics, synthetic fibers, nitrates, hydrocarbons, high octane gasolines, and literally scores of chemicals and other raw materials on a scale that only two years ago was beyond our comprehension.

In addition to these potentialities in production and techniques, industry will have available the greatest number of skilled and semi-skilled laborers in the history of the country. The problem will be how to organize our economy so as to permit these skills and other resources to function most effectively. The task of converting back from war to peacetime industry will not be easy. It will take time—taxes will be high and the debt burden heavy—all of which will add to the task.

Analysis and Forecast of the Situation in the Transition Period

Faced with a situation, when hostilities cease, such as has been just described, what adjustments will be needed and what will the agricultural pattern likely be in the transition period—the period from the end of hostilities until the accumulated demand for durable, semi-durable, and consumer goods has been met?

The situation that will develop in this period will depend in part upon how long the war lasts—how rapidly we demobilize and convert war industries back to peacetime production—how successful we are adjusting our cost—price relationships—the extent of the European demand for food and other materials we are called upon to fill—the policy we follow with respect to trade, our stock position with respect to particular commodities in surplus, etc.

The longer the war lasts, the greater the accumulated deficits in civilian goods presumably will be, and hence, the longer it will take to fill them. The longer the war lasts also the greater will be the strain and drain upon labor and other scarce materials. The length of the war, likewise, will have a bearing upon the length of time required to convert back to peacetime production. This is particularly true in case machines and tools presently set aside awaiting the return of peace, have to be scrapped completely to meet the extraordinary demands of the war for metal.

The rapidity with which we demobilize, in turn, will be determined by the way the war ends and the psychology of the country at the time. If the war does not end abruptly, as has been previously indicated seems likely, then presumably demobilization would be more gradual. On the other hand, the psychology of the country may be such as to force a more rapid demobilization than would be wise. The strains of the war upon the population generally will have been severe. Practically every family will have had either a close relative or friend in the conflict—casualties may have been high. The urge will be to get them home and out of the Army as soon as possible even though a rather large force undoubtedly will be needed for occupational and policing purposes. Conceivably the pressure may be so strong upon Congress and whatever administration that is in power as to force too rapid a demobilization. Associated with this will be the urge to abolish economic controls upon production, prices, wages, rents, etc. all of which conceivably might add up to a bad situation.

While it obviously is a guess, I would be inclined to assume that we will run into a moderate or possibly even a sharp recession in business activity and employment, the first few months after hostilities cease. This to be followed almost immediately by a marked and rapid recovery in which business activity and employment would go back up near the peak period of the war but probably would not reach it.

It seems highly probable that we shall not be able to come out of this war and convert back to peacetime production without dislocations and some recession in business activity and employment. Even with the best of intentions and with the most careful planning there is not sufficient elasticity in our institutional set-up to permit the making of the precise adjustments that would be necessary to bring about this much-to-be-desired goal. Lags inevitably will develop out of the myriad complementary, supplementary, and competing relations in our economy and these, in turn, will produce dislocations and bottlenecks resulting in some temporary, if not prolonged, unemployment. We already have seen how these bottlenecks developed in the reverse situation while we were converting to wartime production. That they will recur and probably to a great degree, seems to me almost certain.

This is not to say that such a recession would be prolonged—it probably would not be since the general demand side of the picture would be so favorable to a rapid recovery. There accordingly should be little if any necessity for elaborate relief and public works programs at that time. Because of its expected temporary nature and because of the accumulated purchasing power in the hands of workers as a result of enforced savings during the war, labor and others generally should be able to weather the storm without being disadvantaged too much.

The effect of such a temporary recession upon agriculture should not be too severe. It would have some affect upon the prices of those products which vary with business activity. It also probably would mean some decrease in the prices of agricultural products generally, particularly of those in heavy supply. The effect, however, should neither be severe nor prolonged. It may be, in fact, that agriculture would be affected less than some of the other segments of the national economy. This arises from the fact that there will be a tremendous demand for food and other agricultural products for relief the moment the war is over. The demand for food

will come first. It will have priority over all other demands. We not only shall have to feed the repatriated nationals of the United Nations but undoutedly we shall be called upon to help feed the under-nourished and starved peoples of the defeated nations as well.

Regardless of how this is handled, whether under lend-lease, through the advance of long-time loans, or on a gratuitous basis, we probably will find that our stocks and reserves of food products particularly will melt away quite fast. There would appear to be little danger of any surpluses we may have at the time becoming burdensome. The question rather will be—Will we have enough?

For the first 6 to 12 months after the war these relief needs should continue high. There should be a very strong demand for fats, dairy products, meats, and other types of protective foods. Wheat and the other bread grains also will be in considerable demand as will cotton.

After the full flush of this relief demand has been met, it would be reasonable to expect some levelling off. The various European and other countries will have reorganized their domestic economies and agricultural and other production will begin to rise. Competition from other raw materials countries will increase. Business activity in the United States, however, should be gaining momentum in the meantime so that the demand for our own agricultural products should continue at a high level. It would be reasonable to assume that this situation will continue until the limits of the accumulated demand for durable, semi-durable, and consumer goods is approached or has been reached. The situation, of course, will not be uniform with respect to all commodities—the limits for some of them will be reached earlier than for others and downward adjustments in production in such products probably will be in order and necessary.

Just how long the recovery phase of this transition period will last, of course, is problematical. Some economists are assuming that it will continue for at least as long a period as the years we were in the war. Its duration, it seems to me, will be determined in large measure by the way we manage our affairs after the war. There does not appear to be any fundamental reason why it could not continue for an indefinite period assuming we are willing to pay the price and do the things that would be necessary to have it continue so. We certainly have the resources, the skills, and the techniques for

keeping our economy on an expanding basis. The question is whether we shall provide the policies, the organizational framework and the institutional adjustments that will permit it so to function.

Up to the time the accumulated demands for durable, semidurable, and consumer goods will have been met, the developments in this period will have been largely the result of forces and momentums generated by the war itself. The very nature of the forces and relationships operating will have been such as to have set in motion certain developments and lines of action to restore the equilibriums upset by the war. While, obviously, a well-conceived policy with respect to demobilization, prices, production and consumption controls, etc. put into effect immediately upon cessation of hostilities would be helpful in guiding the rate, direction and duration of these developments, they inevitably will come about in one form or another irrespective of whether such policies are in effect.

Our Economy in the Post-War Period Proper Will Be Determined by the Way We Liquidate the War and Restore the Peace and By the Kind of National and International Policies We Pursue

Once the post-war recovery phase has run its course our economy will begin to merge into the post-war period proper. What likely will be the situation in this period? Obviously, the problems and questions surrounding and inherent in it are the most difficult and complex of all to answer.

The situation in this period will depend, even in greater degree than in either of the other two periods, upon the over all policies we pursue. We, of course, have no way of knowing now just what decisions will have been reached during the transition period with respect to these policies, hence, we only can speculate about them and consider the possible consequences that would follow if certain assumed courses of action were taken.

Since the situation that will confront us in this period will be determined in considerable degree by the way in which we will have liquidated the war and restored the peace, let us consider first possible alternative ways in which this may have been brought about.

Apart from the problems of demobilization and conversion back to peacetime industry, the two most crucial questions with respect to this relate (a) to the nature of the machinery that will have been

set up to foster international political collaboration, and (b) to the method of handling reparations and the liquidation of international economic obligations.

Inasmuch as an effective economy can flourish only in a stable political world, one of the first prime essentials will be to reach agreement upon some basis for post-war international political collaboration. This will involve such problems as the development of machinery for preventing aggression; the fixing of national boundaries; the treatment of minority groups (particularly in areas of mixed nationalities); the disposition of colonial possessions; disarmament; and related matters.

If we approach the problem in an enlightened manner—free from petty bickerings and national selfishness, there is reasonable assurance that we might look forward to a long period of sustained peace. Not only a world that would be secure politically, but one in which the burden of armament would be greatly lightened and one in which trade and commerce could develop with confidence and on an expanding basis. On the other hand, if we revert to military alliances or to the balance-of-power politics of the Versailles Era, we probably shall be doomed to the periodic recurrence of such tragic holocausts as we now are experiencing. It is to be hoped that there is sufficient statesmanship and enlightened public opinion in the world to prevent this from happening.

Closely associated with the question of political collaboration is the problem of reparations and the liquidation of international economic obligations. The decisions that are reached with respect to these matters probably will be as important as any single factor in determining the economic health of our post-war economy. If we saddle upon the defeated nations extremely onerous reparation terms and insist upon the payment of huge sums in a manner and under conditions such as were imposed after World War I, then we simply shall be inviting the same kind of difficulties we ran into previously. The situation this time will be even more complicated than before because of the tremendous lend-lease obligations that will be a part of the picture. It also will be further complicated by the necessity of untangling the ingenious and unethical financial measures woven into the fiscal and financial structures of the occupied countries by the Axis Powers.

It is important that every effort be made to avoid the faulty economic decisions that followed the last war. Regardless of justifica-

tion on moral grounds, it would appear extremely unwise to force terms that are so impossible of payment as to cause a breakdown of international trade. Although it may appear unduly generous, particularly to the nationals of those countries who have made the greatest financial contributions in underwriting the war, it might be better in the long run if reparations payments of only modest proportions were imposed and if lend-lease and other financial obligations directly related to the war were scaled down greatly and their repayment spread over a long period of years, or even cancelled.

Tied in with and closely related to the problem of reparations and the liquidation of international economic obligations is the problem of trade, foreign exchange, tariffs, etc. This is a very difficult and complicated problem embracing the whole gamut of the creditor-debtor relations of the world. These relationships have been hopelessly tangled for the past decade or two. They will have been intensified and aggravated by the war. To bring some order out of this chaotic condition it would appear necessary to remove at least the most offending barriers to trade in the form of discriminatory tariffs, imports and export restrictions, blocked currencies, etc. It also will be necessary to provide an effective means for stabilizing currencies, and to restore and stabilize the international price level. Unless some effective international machinery is set up to handle these matters it will be impossible to open up and restore the markets of the world. One cardinal principle that must be recognized and accepted by all nations is that if they wish to sell abroad they must also buy abroad—that exports cannot be expanded indefinitely unless imports also are expanded.

This leads into the question of surpluses and how they are to be handled. The problem of surpluses will be most acute with respect to raw materials. Failure to do something effective about it following World War I contributed in considerable degree to the subsequent breakdown not only of the general economy, but also of the peace itself. For practically the entire period from 1920 to 1939, the principal raw materials of the world were in distress. Both production and prices were unstable. The income of raw materials producers not only was at distress levels for much of the time, but eventually their low purchasing power reacted upon general business activity. It is extremely important, consequently, that some means be devised for a much more effective handling of the prob-

lem after this war. Next to reparations and debts and to the political task of building a stable world, there probably is no problem, the solution of which would be of greater significance to the effective functioning of the whole world economy.

The central problem with respect to raw materials is that of devising an effective means for stabilizing their production and prices at levels fair both to producer and consumer nations. There also is the problem of making these materials available to the peoples of the world on an expanding rather than a restrictive basis and further of assisting the backward countries of the world to develop, use and exchange their raw materials in a manner more advantageous to themselves than has been true all too frequently in the past.

The magnitude of the surplus problem in agricultural raw materials will depend in part upon how we utilize them in raising the living standards of the peoples of the world. Large segments of the world's populations long have been virtually on a subsistence basis. They will have been subjected to even greater privations as a result of the war. The problem of living standards is closely associated with the organization of the whole world economy and with the procedures and arrangements that are devised for handling the problems of surpluses and of trade.

A general statement of principles with respect to these problems has been set forth in the Atlantic Charter and in the third of the President's four freedoms (Freedom from Want) to which all of the United Nations have subscribed. If a concerted attempt really is made by the several nations to implement these charters of intentions, then we can look forward to a much more sane and workable international economy after the war is over. To put such a program into effect, however, would require a much higher degree of international political and economic collaboration than we have had in the past. It also would require the establishment of new international machinery and institutional arrangements to give the program practical effect.

With such an international program in operation we would stand a much better chance of maintaining our own economy on an expanding basis. If we are to achieve this it would be necessary, however, to make some rather far reaching adjustments in our internal economy. It would be necessary to alter drastically some of our prevailing industrial production, wage, price, and trade policies. It would require a reversal of the prevailing practice among certain

business groups to produce to maintain a price, and among labor groups to maintain certain existing practices. It would also mean a significant alteration in some of our existing agricultural programs.

I think that most economists would agree that it would be desirable for our post-war economy to move in this general direction—to make human welfare the central objective of our efforts and to so organize our economy as to achieve or to move in the direction of achieving a maximum utilization of resources. We undoubtedly have the skills, the techniques and the resources to do so, but we shall need to supply the overall policies, the institutional adjustments, and the organizational framework to bring it about.

Will we do it, or will we permit our economy to revert to the disparities, dislocations, and maladjustments that prevailed before the war? What we do about this will determine the way our general economy will function in the post-war period proper. It also will determine what sort of agriculture we will have. If we embark upon a program of economic expansion and make the necessary changes in our production, wage, price and trade policies, we can achieve many of the adjustments that long have been needed in agriculture —and can overcome many of the disparities in income, housing, nutrition, health, medical care, etc., that many of the underprivileged people in this and other parts of our economy have been laboring under so long. Unless we do follow some such course of action as this, we probably shall find that our post-war world will continue to plague us with the same general problems and difficulties we have experienced in the past.

DISCUSSION BY M. R. BENEDICT

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Dr. Elliott has provided an interesting and well-balanced statement of the problem. He rightly emphasizes both the difficulty and the importance of studies in this shadowy realm. Any approach to post-war problems must be qualified with many "ifs" and "ands." Action programs relating to them will inevitably be colored and modified by the sequence of events, the depth and significance of the formal analyses made, and the evolution in mass thinking and attitudes.

In the latter part of his paper Dr. Elliott seems to imply somewhat more confidence in the post-war wisdom of our people, and others, than a review of past events will justify. Here he seems to me to shift unconsciously from pure prediction to expectations based on what he as an economist would

like to have happen. In general the economist and the sociologist are more optimistic about the controllability of social forces than are historians and anthropologists. The anthropologist, A. L. Kroeber, has raised this question in a very challenging way in an informal statement made some years ago:

> When a society is controlled—and in some way it always is, by government, religion, education, and the like—its culture therefore seems to be controlled. But is it? This is no rhetorical question but a very real one, rooted in the crux of the problem. Somebody controls somebody else; but who controls the controller? The usual assumption is that he controls himself, and therefore, with some or all of the agencies of control from army to propaganda in his hand, he partly or wholly controls society and its future; and from that we assume that he controls culture. But what if, so far as culture is concerned, it is culture that to begin with controls him? In that case the controller, or controlling group, is merely helping to crystallize the ideas and ideals, developed, emergent, or decaying, which his culture instilled into him in the first place.

These views are presented in even more positive terms by the historian James Westfall Thompson:

> There is no instance in history of a government which ever yet has succeeded in mastering organic growth or decay. In the long run mankind is powerless against the tide of history.

Here are views by competent scholars thinking in terms of long sweeps of time. They are speaking of cultural changes, but their comments apply likewise to many economic phenomena. To many their conclusions appear negative and pessimistic. Nevertheless we need the stimulus of such questioning to understand the difficulty of the problem that lies before us. We need now to consider our place and responsibility in the vast adjustments now occurring in the world. Are great empires, such as the British and Dutch have built up, in the process of decay or are they possibly in the forefront of progress toward a newer and better type of international collaboration? We do not know and we cannot know. Nevertheless we dare to hope that with our newer and sharper tools of analysis, our facilities for mass education, our knowledge of propaganda if you will, we may be approaching a time when intelligence can play a larger role; when emotions even though still a dominating influence will at least be more amenable to guidance whether in the right or the wrong direction. We cannot deny that propaganda has been a powerful influence in throwing the world into this cataclysm; in creating this nascent situation in which new ideas, whether good or bad, may have a chance to take root and grow. We are forced to recognize the biting truth of Robert Louis Stevenson's caustic comment, "It is written that men shall not live by bread alone, but chiefly by catch-words."

If then this relatively pleasing outcome which Dr. Elliott sketches is to become a reality, it will not be merely through conscientious analyses by economists and other scientists, but through a vastly more widespread educational process than we have known heretofore. A part of the task will be to invent the right "catch-words," to educate the leaders who happen to emerge in the democratic political process, and to speak more boldly than academic people have been wont to do. It is no time for the

economist merely to reflect the prejudices or implement the selfish demands of his particular group whether in agriculture, labor, or business.

Dr. Elliott's forecast, if we may call it that, seems to me to imply that the situation will be dealt with intelligently through scientific analyses and skillful propagandization. Granting that these may play a larger role than in any previous period, I still find myself unable to foresee so rosy an outlook.

Turning more specifically to those parts of the paper which are in the nature of prediction, I am unable to see likelihood of an early business recovery reaching "near to the peak period of the war." Consider, for example, how many washing machines, refrigerators, radios, and vacuum cleaners the resources going into a single battleship could produce; how many farm tractors and automobiles the makers of army tanks could bring forth. This is not to mention the vast facilities for airplane manufacture and for the building of ships, guns, and other war equipment. If the upswing should come as fast as that another violent crash seems inevitable. A slower adjustment with the backlog of consumer shortages met over a period of years would seem more wholesome. There may be no means of achieving such an end. It must be recognized, however, that even a levelling off after a very rapid upswing is likely to throw an economy into a disastrous downward spiral.

Even with a slower adjustment great skill, surpassing anything thus far demonstrated, will be required if serious repercussions are to be avoided. If the view just expressed is accepted there would appear to be need for rapid shortening of hours of labor, encouragement for women to withdraw from industrial occupations, a considerable volume of public works, and moderation in the rate of demobilization.

While dislocations are bound to be numerous, I do not see so much prospect of bottlenecks as Dr. Elliott apparently does. Wise handling of the release of stocks accumulated for war purposes would seem likely to meet most of these needs. There is perhaps more danger of embarrassment from oversupplies of some commodities. It is to be hoped, of course, that major war accumulations will be used immediately to ease the situation here and abroad. One has only to look back at the difficulty in liquidating wool stocks at the close of the last war to realize how troublesome such stock can be in the domestic economy.

Much as I would like to agree I am unable to take so optimistic a view as to the lack of need for relief and public works. It is evident, however, that unemployment insurance and accumulated savings should ease this situation a good deal. However, if this army comes home with large savings it will be the first in the world's history to do so.

Dr. Elliott's rather easy assumption that we can continue at a high production level or even on a continually expanding basis if we are willing to pay the price seems to me unrealistic. Granting that this is much to be desired, I am unable to accept the assumption that we know how to do it. All too often measures designed to accomplish one purpose turn out to have done the opposite. We have much yet to learn about how to harness private initiative and government aid into a smoothly working team.

We can all subscribe to the ideal of international order and collaboration which has been set forth. Can we be assured, however, that there will not be a new crop of Cabot Lodges, Borahs, and Johnsons to upset it? While space permitted only the briefest mention in Dr. Elliott's paper of problems in the international field the viewpoint is one to which most thoughtful and informed people will subscribe. I find myself at a loss, however, to be sure what he means by "restoring" the international price level. Certainly stabilization will be needed, but very probably a relatively high level of prices, if it can be brought about, would be the best means of easing the crushing burden of national and international debts. The proposal to remove trade barriers and blocked currencies, while dear to the heart of the liberal economist, may run counter to the trend of post-war efforts to handle surpluses of raw materials. A planned approach looking to achieving prices "fair both to producer and consumer nations" may involve more controls rather than fewer. I shall not discuss the merits of that problem here, but merely express the opinion that the road to free exchange of raw materials will be a difficult one.

The emphasis on the Atlantic Charter goal of "Freedom from want" seems to me a drop to the "catch-word" level. Granting its usefulness in the circumstances which surrounded its enunciation, the concept is an extremely vague one in a world of widely varying standards of living and with many areas of unrestricted reproduction. The difficulties of this approach are evident from a reading of a recent attempt by the World Citizen's Association to analyze its implications.[1] Nevertheless we can well agree that it would be desirable "to make human welfare the central objective of our efforts" and "for our post-war economy to move in this general direction." But the way will be difficult and painful, and we shall doubtless find when we reach it that our Utopia of equality for all mankind lacks many of the modern conveniences. For us to make a contribution toward it calls for a large measure of wisdom, clear vision, and the use of the "right kind" of "catch-words."

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[1] The World's Destiny and the United States. A conference of the World Citizen's Association, Chicago, 1941. Chapter III.

CANADIAN AGRICULTURAL POST-WAR PLANNING

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THE necessary planning of food production to prevent privation is based upon at least three foundations. These three supports are not given equal weight nor are they uniform. The result may be a lack of harmony among them. Yet, each have their peculiar influence on outcome. This promotes an unstable position that requires adjustment from time to time.

The three foundations of the planning prevalent are first the position of the food providing industry at the commencement of regulation. This position has an influence on present and future production. The second (chronologically) foundation is the food requirements to ensure victory. The third is the prevention of a return to pre-war conditions as expressed in the planning necessary in winning the peace that must follow victory. The post-war planning that is now so frequently discussed depends on the completeness of the victory. Further, it is frequently suggested that any complete victory also depends upon the plans now made and clarified. For these reasons it is a privilege and also a responsibility to discuss the topic at this time.

No hope may be entertained of treating these three topics in the detail warranted due to the limitations of time and space. Brevity is possible in drawing the attention of a well informed group to the pre-war position. That detail has been the subject of countless volumes. Yet it is necessary to briefly mention the pre-war position as that foundation is responsible for some of our present planning. Further, the resolve to prevent that position from again prevailing is one of the major reasons of the attention now given to post-war planning.

The Pre-War Position

The December, 1939 number of the Business Bulletin of the Cleveland Trust Company said:[1]

"This year of 1939 has at least two claims to a noteworthy place in history. It is not only the year in which this present war began. It also marks the end of the first decade of the Great American Depression which began 10 years ago in the autumn of 1929."

[1] The Cleveland Trust Business Bulletin, Vol. 20, No. 12, December, 1939.

Belief that a depression the age of which is reckoned in decades is man-made and must be man-corrected is a premise of this paper.

During the depression referred to the author flirted with a theory. This theory was the impossibility of the exploitation for long of any group or any area without the practice proving costly. There was ample proof during the 'thirties that inequality of purchasing power between groups brought about unemployment more or less promptly. There was also ample proof that inequality of purchasing power between areas lessened trade. This applied both within countries and internationally. It is a debatable point whether we are not now paying partly at least for the cheap rubber, oil, tin, sugar and even bananas of other days. Of course it might be argued that the necessary supply price does not mean that any undue advantage may accrue to the consumer. Yet more recent proposals point to the need for providing more favorable terms to groups and areas whether they deserve it or not and certainly whether they themselves can procure more favorable terms for themselves or not.

Some such idea was evolving slowly in some parts of the world during the period of depression. This was demonstrated internationally by the frantic efforts that were resorted to during that time to prevent international trade in some farm products not because they were too costly but because they were too cheap. Too cheap for whom, the consumer? Apparently not. Rather for the provider whom it seemed necessary to keep employed. National self-sufficiency was partly due to preparation for war. It also prevailed in some countries that were not preparing for war. The endeavour to regularize employment equalizing purchasing power between groups was well underway in pre-war years. This movement was more pronounced in some places than in others. The events of the past three years have done much to clarify the complex problem. These events have also brought the matter into the realm of discussion.

The incidence of the world-wide depression of the 'thirties in agriculture varied in different countries. Those most dependent on world markets for the disposal of surpluses were particularly hard hit. Canada with around 60 million acres in field crops and less than 12 million population is a good example.

On the other hand, countries normally on an import basis for farm products suffered less and at the same time had available a simpler remedy. The trend toward self-sufficiency spread, bolstered

by tariffs, quotas and other devious but well known methods too numerous even to be mentioned here. All countries planned to help agriculture. Plans necessarily varied in different places. Canada under the Prairie Farm Rehabilitation Act, in modern terms the P.F.R.A., limited the acreage devoted to wheat prior to the outbreak of war. The billion bushels available at the end of 1942 however has prompted a plan of devoting only 18 million acres to wheat in 1943 as contrasted with 21 million in 1942 and 22 million in 1941 and nearly 29 million acres in 1940. A reduction from 28,726,200 acres in 1940 to 17,696,000 acres—the goal for 1943—is a reduction of 38.4 percent. This plan amounts to a rather drastic reorganization of farming in Canada in the space of four years. During the 'thirties while all countries were engaged in the difficult job of assisting agriculture, greater results were apparent in some places than in others. Countries that were normally importers were engaged during this time in expanding production. Countries normally exporters gave their attention chiefly to reducing surpluses. Britain prior to the outbreak of hostilities claimed that all home produced staple farm products enjoyed some measure of price insurance.

War Experience

Promptly after the outbreak of hostilities the British and Canadian governments entered into agreements for future supplies of farm products. Supplying farm products on contract received a great impetus. Some of these contracts may be referred to later if space permits. In the meantime it is important to note now that producing to order has provided experience during the war years that is influencing plans for the post-war period. It is quite certain that even more valuable experience will be secured before the plans proposed will be needed. This may provide basis for their modification.

During the first two years of the war food surpluses were common and prices comparatively low. By the beginning of the third year of the war prices of some farm products were rising rapidly and ceilings over retail prices were established. Price ceilings have had a very salutary effect on prices of farm products. Here again experience is being gained that already has and will in the future have more influence on future planning. It is necessary to state here that while both production on contract and production under price ceilings are both war experiences, they are two separate things that

have now become more or less merged. The first mentioned had two years' start, on the later mentioned. In the matter of experience there has been three years' experience of the former and one year's experience of the latter.

The extent to which prices of farm products have been kept down and production expanded is remarkable. How this has been possible will be discussed later. Expansion of production was helped tremendously by favorable seasons. Yet some shortages have developed and this is generally credited to a shortage of farm labor. Scarcity of food together with expansion of production termed remarkable may require explanation. The explanation is in increased demand both domestic and overseas. The war period has demonstrated quite clearly how increased purchasing power may expand the volume of farm products consumed at a stabilized price. This is also valuable information for future planning.

The thriftless 'thirties and the war period so far have furnished the foundation for post-war planning. The 'thirties demonstrated how *not* to do things. During that period some writers filled volumes with the defeatist conclusions that millions of unemployed may be normally expected. The war period has already revealed not only a scarcity of manpower but also a shortage of some types of food. Herein is the basis of post-war planning. The 'thirties gave an example of a condition of unemployment to be avoided in the future. The war period has demonstrated that there is at least one way of employing people. Many claim that if this can be done during war it can also be done when peace returns. They do not all claim to know how. Yet most of them are persuaded of the need for such a development. Some are trying to work out ways of its accomplishment.

Reconstruction and Agriculture

Post-war planning in Canada includes three definite activities now underway that have a direct or indirect relation to agriculture. These are the education provided for the armed services, the Land Settlement Committee, and the Reconstruction Committee.

The provision of education for the men in the services provides correspondence courses that are now being carried on. Included among these studies is a course entitled "The Business of Farming in Canada."

Provisions have also been made for re-establishing ex-soldiers on the land after the war. This assistance is based on farm ownership,

the capital provided on long-term repayment basis amounting to $4,800. Of this amount $3,600. is to be invested in the farm itself and $1,200 in equipment.

The Reconstruction Committee is a committee set up under and working in an advisory capacity to the Federal Government. It is under the chairmanship of Principal James of McGill University. This committee is canvassing all possible avenues of reconstruction from the point of view of providing maximum employment in the post-war years. Well up on the list of its activities is "The Rehabilitation of Agriculture."

Though this in itself might be considered by some as a large task yet the more hopeful angle to the work of this group is the coordination of agriculture and other industries. Typical of how this is carried on is an investigation now proceeding in a certain county with a view to converting farm to forest land with the idea of rehabilitating the whole area.

In a recent address the chairman of the Reconstruction Committee is reported as follows:

> "Canada must have a post-war policy that will provide jobs for all men and women who need them, jobs that will afford as high a living standard as can be attained through the intelligent utilization of all natural resources. Social insurance is not the answer, it is not productive, it is a sad measure of the inefficiency of reconstruction policies denoting a failure by government and business between them to provide adequate employment."[2]

This is a pleasing contrast to the writers of the 'thirties who looked upon millions of unemployed as a more or less normal condition. The possibility of full employment in the post-war period is no doubt due in part to the experience of scarcity of manpower of the present time.

An assumption of the committee is that private initiative may be retained. The above quotation indicates the possibility of the public through various agencies also taking the initiative should necessity arise. In fact the functioning of the committee is a governmental activity.

There are other groups planning for the post-war period internationally. Some of these groups are working quietly for greater freedom of trade so close to us that it is possible to miss their importance altogether. There is one group that has already reported

[2] Principal James Address, Canadian Club, Montreal, December 14, 1942.

progress in the form of the International Wheat Agreement.[3] In regard to expansion of trade this agreement provides access on equal terms of all nations to the trade and raw materials of the world; collaboration with the object of securing for all, improved labor standards, economic advancement and local security; to eliminate all forms of discriminating treatment in international commerce; and to reduce tariffs and other trade barriers.

It is clear that any approach to a rehabilitation of Canadian agriculture soon fronts the problem of freedom of international trade in the post-war years. The position of wheat is pretty well known.[4] There are other less well known products that also depend on post-war freedom of trade. Their management during the war may also be quite as influential on post-war plans as that of wheat. One of these that gives a good example of expanded production on a contract basis is bacon. The following table shows past provision and current contract.

BRITISH BACON CONTRACTS[5]

	1939–40	1940–41	1941–42	1942–43
Contract period	Nov. 1–Oct. 31	Nov. 1–Oct. 31	Oct. 12–Nov. 30	Dec. 1–Nov. 30
Quantity (million lbs.)	291.0	425.6	600.0	675.0
Quantity shipped	331.0	425.8	600.0	—
Price per 100 lbs. Grade A Wiltshire Canadian Seaboard	$18.01	$15.82	$19.77	$21.75
No. hogs required for export	2,500,000	3,700,000	5,200,000	5,625,000
Av. weekly	48,000	71,000	100,000	108,000

Producing pork on contract apparently can be done. True there was some good luck included. Increased numbers of pigs were on the way when the war started. The first contract was more than filled. The price was reduced the following year with increased quantities required. The second contract was not exceeded. The country was two weeks late in filling the 1941–42 contract. This was not so bad. The author has waited six weeks for a motor car when there was no war on.

Contracts for cheese, eggs, poultry products, fruits and canned goods have been agreed on and completed. This has been done by regulated prices but not by regimented production. Favorable

[3] A. Cairns, The International Wheat Agreement. Statement to Wheat Committee of the American Farm Bureau Federation, Chicago, December 7, 1942.

[4] H. S. Patton, Wartime Wheat Policy in Canada. JOURNAL OF FARM ECONOMICS, Vol. 24, No. 4.

[5] H. K. Leckie, The 1942–43 Bacon Agreement, *Macdonald College Journal*, Vol. 3, No. 3, November, 1942.

seasons have contributed much to the expansion yet the fact that such surpluses have been made available at a lower price per unit than prevails in some other places depends partly on the difference in the organization of the industry in various places. A comparison of the output per man in farming in different parts of the world is interesting on this point.

IMPROVED ACRES PER WORKER IN AGRICULTURE[6]

Canada	76.9	Holland	8.6
United States	50.0	Portugal	8.5
Britain	30.3	Germany	7.2
Ireland	17.0	Belgium	7.1
Denmark	15.7	Rumania	6.0
Spain	12.0	Poland	5.7
France	10.0	Italy	5.1
		Bulgaria	4.2

Improved acres per worker is not the only measuring stick of output per man. It may not be even the best. It is however a comparison that is available for some sections. Further, this comparison must not be taken to suggest that Canada occupies such a prominent world position as no doubt were the comparison extended to include Argentina, Australia and New Zealand a different position might be revealed. Yet with all necessary qualifications this comparison makes some points clear.

It is clear from the comparison why Canada may produce wheat as well as some other farm products more cheaply than some other countries. It is equally apparent why the North American continent is normally burdened with surpluses of farm products and in war time such a dependable source of food supply. It also shows how dependent farmers of this continent are on freedom of trade to get rid of their surpluses. It demonstrates how definitely dependent these farmers are not only on winning the war but also in winning the peace that is to follow. The smaller proportion of manpower required to secure food on this continent in comparison with Continental Europe is perhaps one of our greatest advantages over our enemies in the present conflict. In this connection it might be of interest to recall that European wheat production which was reported at 1,301 million bushels in 1913 reached a low of 740 in 1917 and the average from 1917 to 1920 was over one fifth less than the average from 1913 to 1916.[7]

The important point for our present purpose that this compari-

[6] Agricultural Systems of Middle Europe, edited by O. S. Morgan.
[7] U.S.D.A. Year Book of Agriculture, 1927, p. 748.

son makes clear is the dependence of Canada on world markets for farm products. That dependence is greater in some sections of Canada than in others. While the acres of field crops per person is roughly 5 for the entire country this varies by sections from ⅔ of an acre in British Columbia, 1.6 acres for the three eastern maritime provinces, 2.2 acres for Quebec and Ontario and over 15 for the prarie provinces. The country generally is dependent on world markets. That dependence varies in different sections. Failure of world markets compels greater reorganization of farming in some sections than in others. The degree of reorganization that has already taken place is illustrated by declining wheat areas and expansion in other lines.

Price Ceilings and Agriculture

Some degree of regulation of prices of farm products prevailed in the pre-war period. During the first two years of the war though overseas supplies were produced on contract prices were relatively low. By that time rising prices prompted the establishment of ceilings on retail prices on the base period September '15 to October 11, 1941. Ceilings were established to limit inflation. This objective has general support. The general principle of the regulation of prices is the necessary supply price.

At the time the ceiling was placed on prices there were two rather loud complaints. One was at the rising cost of living. The other was the low prices of farm products. That these two ideas should be expressed at the same time was and is a mystery to many. This somewhat peculiar situation was partly because at the time the ceilings were established prices of farm products were out of line with one another. Production was out of balance with market demand when the war started. This condition continued.

It is not necessary here to dwell on the point that due to seasonal and cyclical fluctuations in supply no one month or one year would find prices of all farm products in line with one another. Both seasonal and sectional adjustments have been made during the past year to overcome this difficulty. The condition in Canada at the time was even more unbalanced than such fluctuations might explain. The index numbers of prices will illustrate.

At the outbreak of the war prices of farm products were below the general level. There was at that time a great difference between the prices of field products and animal products, the two large classi-

fications of farm products. From the outbreak of the war to the time ceilings were established prices rose. Yet they rose faster in animal products than in field products. The difference which amounted in August, 1939 to 27.4 points was in October, 1941, 43.2 points.[8] Prices of field products depend more on world markets than those of animal products. The cost of living is affected much more by animal products than field products. Low prices of farm products and high living costs occuring together is therefore not much of a mystery.

Food Scarcity

The expansion of supply did not in all lines keep pace with expansion of demand. Some foods became scarce. The difference between the necessary supply price and the prices allowed under the ceiling is partly made up of bonus payments from the public funds provided by the tax-payer or money-lender. A similar policy has been followed in Britain in pre-war years. It has greatly expanded there during the war.[9] Recently Sir John Orr recommends such a policy for normal times.

Providing free food for those who otherwise might suffer is one thing. This is a practice that will have general support. It is one of the foundations of the Beveridge Report. That report has been favorably received. Making a food bonus general is quite another thing. It might be advisable if and where providers of food are deemed to occupy favored positions. This is not generally considered to be the condition in Canada. A general bonus enables those who do not provide their own food or any part of it to get it below cost. This does not encourage people to provide their own food or any part of it in the direct way.

Dependence on the tax-payer or money-lender for part payment of food will not relieve the scarcity. The higher the bonus the higher the tax. The higher the tax the higher the bonus may be. This appears to offer almost limitless possibilities of expansion. Such possibilities may influence some expectations as to the new conditions so warmly recommended. Appearances are sometimes deceptive. The higher the bonus the greater the dependence on the money-lender rather than the tax-payer.

Favorable seasons have played a part in the expansion of farm products in recent years. Less favorable weather might easily

[8] *The Economic Analist*, Ottawa.

[9] B. Brandis, Control of Consumption in Britain. JOURNAL OF FARM ECONOMICS, Vol. 24, No. 4, p. 853.

change the supply situation. Yet rationing has so far not been resorted to in any great degree. Rationing might easily improve the diet as nutritionists would have something to do with arranging the ration.

Influence of Regulations on Post-War Periods

Some suggest that present regulations will become more or less permanent. Others take the entirely opposite view. Probably present experiences will yield something of permanent use. That may remain to be seen. What is now certain is that present regulatory methods will have an important effect on the post-war position.

The regulation of prices of farm products will limit inflation of land values. It will also limit profits in farming to the efficient producer who can increase income from expanded volume rather than from higher unit prices. These results combined should find the industry on a firm competitive basis either in world or domestic markets.

Perhaps the most useful experience for the post-war period developing from regulation has been the experience of producing farm products on contract. This was carried on to some extent in pre-war years.[10] The expansion of this method during the war so far, will bear much closer study than space here permits, and merits careful consideration for the post-war period.

DISCUSSION BY H. S. PATTON

Michigan State College

I propose to focus my discussion on what Professor Lattimer refers to as "the second foundation" of agricultural planning, namely, measures pursued in Canada to ensure the food requirements demanded by the war. For these have been developed along lines which I believe are tending to make the Canadian agricultural economy less vulnerable to external conditions, and which are capable of being adapted to ensure greater stability in the postwar era.

Of basic importance with respect to the postwar situation is the far-reaching adjustment in the agricultural economy of Western Canada which is being effected by the combined impact of the war and government policy. Whereas during the last war the wheat acreage of the Prairie Provinces was expanded by 90 per cent between 1914 and 1919, there has been brought about in the present conflict a reduction of 28 per cent between 1940 and 1942.[1] This has been accompanied by an almost equivalent

[10] J. E. Lattimer, The Interaction of Demand, Price and Supply. Macdonald College Technical Bulletin, No. 17, September 1938.

[1] Professor Lattimer is hardly correct in stating that "Canada under the Prairie Farm Rehabilitation Act limited the acreage devoted to wheat prior to the outbreak

expansion in the acreage devoted to seeded grass, feed grains and flaxseed and by a notable increase in the number of livestock on prairie farms.[2] Thus the war, in combination with government quota, price and subsidy policies, is accelerating the diversification of Western Canadian agriculture from a predominant wheat economy whose fortunes are mainly dependent on external and weather conditions.

Although wartime agricultural production in Canada has been patterned and geared primarily to meet the food requirements of Britain, and while, as Dr. Lattimer shows, its productive capacity will continue to make Canadian agriculture largely dependent on foreign outlets until the population of the Dominion has greatly increased, I do not believe that this implies the inevitability of a severe postwar depression for Canadian farmers. Until European, Russianand Chinese agriculture can be rehabilitated after the war ends, the acute food deficiencies of these ravaged areas will have to be supplied mainly from Canada, the United States and Argentina. After this rehabilitation is achieved the volume and character of Canadian agricultural exports will depend largely on prevailing national commercial policies.

I agree with Dr. Lattimer in the importance he attaches to the possibilities of continuation of wartime food supply on a contract basis. As he shows, the response of Canadian farmers to guaranteed prices based on contracts with the British Food Ministry has been impressive. While Britain may be expected after the war to resume imports of bacon, cheese and eggs from Denmark and other prewar sources of supply, and to be less dependent on Canada and the United States, it is unlikely that the free competitive system of world markets and future trading will be restored. The necessity of protecting its own war-expanded farming industry, as well as its foreign exchange position, and the rationalization of food supply and distribution effected under the wartime Food Ministry are likely to be potent influences towards continuation of a system of food import boards as was advocated by the Labor Party in the twenties. Similar arrangements may be expected in other European countries. Collective purchasing would almost certainly tend to be matched by collective selling, involving supply contracts with export boards in surplus producing countries, such as Canada maintains in its present Wheat, Bacon, Dairy Products and Special Products Boards. Under sucha system, competition would still persist in the negotiation of intergovernment contracts, but it would tend to reduce speculative risks to producers by ensuring definite seasonal outlets and

of war." The PFRA of 1935 merely provided a program of modest federal assistance for soil conserving and local water development projects in drought areas. It was not until the second year of the war that definite steps were taken to curtail wheat acreage by limiting farmers' marketings of the 1941 wheat crop to a national total of 280 million bushels, and not until 1942 that marketing quotas were accompanied by a system of bonuses for diversion of wheat acreage in Western Canada—See H. S. Patton, "Wartime Wheat Policy in Canada," JOURNAL OF FARM ECONOMICS, November 1942.

[2] Whereas in 1938–39 farmers in the Prairie Provinces derived 60 per cent of their total cash income from the sales of wheat, and only 33 per cent from livestock and animal products, the proportions in 1941–42 were 30 and 60 per cent respectively. In June 1942, fifty-eight per cent of all hogs on Canadian farms were attributed to the three Prairie Provinces.

prices, by providing collective responsibility for the carrying of surpluses, and by affording a basis for planned adjustment of production.

A variant of the contract plan, applicable to domestic as well as export products, that might be advantageously continued after the war, is the method, at present being extensively employed in both Canada and the United States, of announcing in advance seasonal government-supported prices for basic commodities at levels designed to call forth the output desired. If extended into postwar periods of declining demand these support prices should be adjusted with reference to existing carryovers and prospective outlets, rather than to historically based parity levels or questionable cost-of-production formulas. While such a policy could doubtless encounter opposition from certain farm organization quarters, it has proved workable as carried out through the Canadian Wheat Board, and even a downward-adjusted price, if guaranteed (and possibly accompanied by diversion bonuses) may prove more attractive to farmers than production for a speculative market, and ensure greater long-run stability than an artificially maintained price which results in surplus accumulation. The "forward pricing policy" as advocated by Geoffrey Shepherd,[3] is perhaps more likely to find postwar application in Canada where it is now in general wartime use, than in the United States with its consecrated parity formula legislatively embodied in the basic Agricultural Adjustment Act of 1938.

There is another respect in which postwar agricultural adjustment may prove less difficult in Canada than in the United States. I refer to the earlier and more stringent application of price ceilings to farm products in the former country. Between July, 1939, and December, 1942, the wholesale price index of farm products as a group in Canada advanced by 38.8 per cent, compared to a rise of 80 per cent in the United States within the same period. The December, 1942 index of 87.0 in Canada, moreover, was still considerably below the 1926 base. Where food price ceilings as established by the Wartime Prices and Trade Board (with a view to stabilizing the cost of living, and precluding the necessity of authorizing cost of living wage bonuses) have been found to be too low to ensure the desired output, they have been supplemented by federal or provincial subsidies to producers, or production costs have been kept down to eastern farmers by federal absorption of freight charges on feed grains shipped from the Head of the Lakes and by fertilizer subventions. It is estimated that Dominion government subsidies and bonuses to agriculture during 1942 amounted to $90,000,000.[4] These subsidies, as a nationally diffused charge, have served to ensure needed agricultural output and sustain or augment farm income, while holding down the cost of living. After the war these may be reduced or withdrawn as the output from higher cost sources may cease to be required, or as farm costs in general may decline, thus cushioning the pressure on price themselves. The greater the extent to which advances in farm prices have been held in restraint during the war, the less formidable will be the problem of stabilizing them after the war emergency.

[3] In "Bases for Controlling Agricultural Prices," JOURNAL OF FARM ECONOMICS, November 1942.

[4] *The Economic Annalist* (Ottawa), Dec. 1942, p. 88.

PRICES PAID BY FARMERS: THEIR USE IN ADMINISTERING WARTIME PRICE CONTROL PROGRAMS

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THE economic position of the Nation's farmers to a great degree is dependent not only on the prices they receive for the commodities they produce and sell, but also on the prices they pay for goods and services used in living and in production of their crops, livestock and livestock products. The Bureau of Agricultural Economics, having recognized for some time the need for a measure of the changes in prices paid by farmers for things they buy, constructed and published in 1928 a series of index numbers for this purpose. Index numbers of prices received by farmers had been available for some time prior to this.

The original "prices paid" series of index numbers, revised in 1933–34 on the basis of later data, was brought into prominence by the Agricultural Adjustment Act of 1933 which set forth the oft-quoted definition of the parity principle and declared that it was the policy of Congress among other things to: ". . . reestablish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles that farmers buy, equivalent to the purchasing power of agricultural commodities in the base period. The base period in the case of all agricultural commodities except tobacco shall be the pre-war period, August 1909–July 1914. In the case of tobacco, the base period shall be the post-war period, August 1919–July 1929." Thus was parity for agriculture legally formulized and started on its way. Although the original definition has been modified from time to time, these amendments have been made primarily to provide the use of more recent base periods for certain commodities. The base period for flue-cured and burley tobacco was changed to the period August 1934–July 1939. The use of the base period August 1919–July 1929 was authorized in the case of commodities for which adequate data were not available for the pre-war period.

Public Law No. 320, 74th Congress, approved August 24, 1935, provided for the inclusion of interest and taxes per acre in the case of all commodities with an August 1909–July 1914 base. All of these

modifications, however, left unchanged the dominant role of the prices-paid series in determining parity.

The prices paid by farmers, used in the construction of the index, were obtained only on an annual basis from 1910–22. Since that time most items have been priced quarterly in March, June, September, and December. Feed prices have been obtained monthly in recent years.

At the present time prices of commodities bought by farmers are reported periodically by more than 20,000 voluntary reporters, composed in the main of independent retail merchants serving the farm population of the United States. These price quotations are secured by means of mailed questionnaires sent to the individual reporter. Seven types of respondents are circularized, each with an inquiry designed to fit the type of business he conducts. Schedules are sent out covering the following broad groups of commodities bought by farmers:

Quarterly Inquiries

Food, tobacco and household articles
Clothing and dry goods
Equipment, supplies and machinery
Furniture, furnishings and floor coverings
Automobiles, supplies and equipment
Building material, fencing material and ice
Seed and fertilizer

Monthly Inquiry

Feed

Mailings of these questionnaires are made from the 41 field offices of the Bureau of Agricultural Economics (in which work on agricultural statistics is carried on) to merchants in each of the 48 States so as to reach them on the 15th of the month. The returns are sorted by counties, tabulated, and edited by a qualified statistician to detect any obviously erroneous quotations due to misunderstanding of the questions. Simple averages of all quotations for each item are then computed and forwarded to Washington for review along with any pertinent comments concerning unusual occurrences such as price wars, strikes, or other conditions likely to affect local prices.

These State prices are then reviewed in Washington and after

acceptance are weighted by appropriate weights to give a United States average price for each commodity for that date.[1]

The average prices for the United States are then arranged by major groups of commodities for incorporation in the index. For commodities other than feed, sufficient quotations from supplementary sources are obtained to prepare preliminary estimates of prices.[2] The broad group of items used in the farm family living is broken down into the following smaller groups:

> Food (22 items), clothing (17 items), supplies (11 items), furniture and furnishings (21 items), motor vehicles (1 item) and building materials for house (14 items). This gives a total of 86 items used for living which are included in the index of living costs. In addition, prices are collected on some 100 other items used in living which will be added at some future date.

The group of commodities used in production is also broken down into smaller groups:

> Feed (12 items), farm machinery (22 items), motor vehicles (3 items), fertilizer (9 items), building materials (19 items), equipment and supplies (16 items) and seed (7 items). This gives a total of 88 items used in the index of production. For these groups prices are collected also on over 100 additional items not yet incorporated into the index.

No effort has been made to define rigidly most of the items on which prices are asked; instead reporters are asked to give quotations for the kinds most commonly sold to farmers. This obviates the difficulty of making many adjustments for the introduction into the index of newer types of articles of the same use when they replace articles rigidly defined which have been outmoded. When a farmer goes to town to buy salt he still buys as much salt is is called for by his needs, regardless of the fact that the salt he now buys has been refined and iodized, whereas it lacked this essential element twenty years ago. The question may be raised: isn't it a better and different product from that priced in the base period?

[1] The weights used are estimated quantities bought by farm families. For most commodities these estimates were obtained by multiplying the number of farms by the average purchases per farm family for each item as shown by the Consumer Purchases Study, 1935–36, Bureau of Home Economics, U. S. Dept. of Agriculture.

[2] For a description of the method used in combining the various sub-groups into the all-commodity index see pages 23–30 of "Agricultural Prices," July 29, 1942, Bureau of Agricultural Economics.

Certainly it is a different product. If better, shouldn't the farmer be allowed the same increase in living standards as the rest of the population? Admittedly machinery is better and more free from breakdown than previously, but shouldn't the farmer be allowed his rightful share of the technological progress of the country? Should he be required to base his increased costs on the price he would pay for an out-of-date type of machine now as compared with the base period? The answer is obvious. Whether it is pulled by a tractor or by a Missouri mule, it still takes a mower to cut hay.

Some of the items used in the index, especially building materials, are subject to more rigid definition. For example, in the case of 2×4 framing lumber, quotations are asked for "2″×4″×16′. common pine per 1000 bd. feet" separately for No. 1 and No. 2 grades. The same of common fir 2×4's, also are carried on the inquiry. These specifications can be reasonably expected to apply over a span of years.

The use of the index of prices paid by farmers in computing parity or comparable prices is undoubtedly its greatest role in the war-time economic setup. The first step in computing a parity price for any commodity is to determine a base preiod price. Where satisfactory data are available this base price is obtained by averaging the prices received by farmers for the 60 months August 1909–July 1914. Congress has specified other base periods to be used in computing parity prices for certain commodities (tobacco and potatoes) even though data were available for the pre-war base period. In the case of certain fruits and vegetables the base prices are averages of season prices for the marketing seasons falling within the 120-month period August 1919–July 1929.[3] This post-war period was used for these commodities because adequate data were not available for the 1909–14 period.

The current index of prices paid (including interest and taxes for the commodities having an August 1909–July 1914 base) is multiplied by the base period price to obtain the current parity price. Parity prices, of course, change currently with changes in the index of prices paid. For instance, the base period price of wheat is 88.4 cents a bushel. On October 15, the parity price of wheat was 136.1 cents a bushel—obtained by multiplying the base price of 88.4 cents

[3] For a complete list of base periods and base period prices see pages 23–33 of the June 29, 1942, also pages 26–29 and page 5 of the September 29, 1942 and November 30, 1942 issues of *Agricultural Prices*, respectively.

by the October 15 index (154) of prices paid by farmers including interest and taxes. On November 15 the parity price of wheat was 137.0 cents a bushel because the index of prices paid, interest and taxes had increased to 155. Average prices received by farmers for these two dates were 103.5 and 104.4 cents a bushel, respectively.

For agricultural commodities having a base period other than August 1909–July 1914 inclusive, parity prices are determined by multiplying the base period price by the index of prices paid (excluding interest and taxes) converted to the proper base period. A list of the different base periods other than 1909–14 used for parity price determinations as of the present date, together with the conversion factors necessary to convert the prices paid index (excluding interest and taxes) to the same base is given in Table I below. Base periods for some commodities, notably tobacco and potatoes, have been specifically set by Congress, while others have been set under general provisions of law allowing base periods to be established within the period August 1919–July 1929 for commodities for which adequate data were not available for the August 1909–July 1914 base period.

TABLE 1. CONVERSION FACTORS NECESSARY FOR COMPUTING PARITY PRICES FOR AGRICULTURAL COMMODITIES FOR BASE PERIODS OTHER THAN AUGUST 1909–JULY 1914

Months Included in Base Period	Index Conversion Factor (To be divided into index of prices paid excluding interest and taxes)
August 1919–July 1929	160
August 1920–July 1929	155
August 1922–July 1929	154
August 1923–July 1929	154
August 1924–July 1929	155
August 1925–July 1929	154
August 1926–July 1929	154
August 1927–July 1929	154
August 1934–July 1939	125

The parity price for beets for fresh market (base period August 1922–July 1929) as of November 15, 1942, would therefore be calculated by dividing the November 15, 1942 index of prices paid (excluding interest and taxes) of 156 by 154 to obtain the index of prices paid on an August 1922–July 1929 base of 101. This converted index, when multiplied by the base period price for beets for fresh market of 60 cents per bushel gives 61 cents per bushel as the

November 15, 1942 parity price for fresh beets.[4] Comparable prices are computed in the same manner. However, derived base period prices for items for which comparable prices are used rather than parity prices are either on an August 1909–July 1914 or an August 1919–July 1929 base.

Under the provisions of the Emergency Price Control Act of 1942, approved January 30, 1942, and amended October 2, 1942, parity prices have become of utmost importance to the farmer as the pricing function of our economy comes under broader and broader controls. Section 3 as amended reads: "No maximum price shall be established or maintained for any agricultural commodity under authority of this Act or otherwise below a price which will reflect to producers of agricultural commodities the higher of the following prices, as determined and published by the Secretary of Agriculture—

(1) The parity price for such commodity (adjusted by the Secretary of Agriculture for grade, location, and seasonal differentials) or, in case a comparable price has been determined for such commodity under and in accordance with the provisions of Section 3 (b) of the Emergency Price Control Act of 1942, such comparable price (adjusted in the same manner), or

(2) the highest price received by such producers for such commodity between January 1, 1942 and September 15, 1942 (adjusted by the Secretary of Agriculture for grade, location, and seasonal differentials), or, if the market for such commodity was inactive during the latter half of such period, a price for the commodity determined by the Secretary of Agriculture to be in line with the prices, during such period, of other agricultural commodities produced for the same general use; . . ."

It will be seen, therefore, that even though provision is made for other maximum price determinations, none of these are operative unless these give prices above parity. Parity thus becomes a floor for fixing price ceilings for the products farmers sell.

In addition to wartime price controls, parity price bases are being used wholly or partly in the administration of programs involving Commodity Credit Corporation loans, parity payments, sup-

[4] The base period price is the average of the seven season prices 1923 to 1929 inclusive. This is used with the August 1922–July 1929 base index because the bulk of each year's crop is sold before August. Adequate data are not available prior to the 1923 crop.

port prices for non-basic commodities and marketing orders and agreements.

The Commodity Credit Corporation is at the present time authorized and directed to make loans available to cooperators (except cooperators outside the commercial corn-producing area, in the case of corn) for the six basic commodities at 90 percent of the parity price for the commodity as of the beginning of the marketing year. Loans to cooperators outside the commercial corn-producing areas (in the case of corn) and to noncooperators for the other basic crops are set at lower rates. These provisions apply to any crop of the six basic commodities harvested after December 31, 1941 and until the end of the second full calendar year following the year in which the war is officially declared to be terminated. The President is given power to fix loan rates less than 90 percent of parity on these crops, but not less than otherwise provided by law if he determines that a loan rate so fixed is necessary to prevent an increase in the cost of feed for livestock and poultry and to aid in the effective prosecution of the war. Under this authority the President on October 7, 1942 directed the Secretary of Agriculture to maintain the loan rate on corn and wheat at 85 percent of parity.

Parity payments, contingent upon compliance with the 1943 farm allotment, are to be made in an amount necessary to bring the total payment received up to the parity price for each basic commodity. In computing the amount of the parity payment the price received for the 1942 crop or the loan rate, whichever was highest, plus all other government payments are to be taken into account.

Support prices for the non-basic commodities for which the Secretary of Agriculture has asked increases in production are based on 90 percent of the parity price for each such commodity.

The issuance of marketing orders and agreements was tied in with the parity principle by the language of the Agricultural Marketing Act of 1937, as amended, which states in Section 2: "It is hereby declared to be the policy of Congress—

(1) Through the exercise of the powers conferred upon the Secretary of Agriculture under this title, to establish and maintain such orderly marketing conditions for agricultural commodities in interstate commerce as will establish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles that farmers buy, equivalent to the purchasing power of agricultural commodities in the base period; . . ."

Further provisions of the act prohibit any action under its authority which has for its purpose the maintenance of prices above parity.

Exception is made in the case of milk where under certain economic conditions, marketing agreements and orders are permitted even though seeking to maintain prices above parity.

Due to the restricted manufacture of many nonagricultural products, an increasing percentage of the average family's purchases of available goods is being made for agricultural commodities or products processed from them, and parity prices, therefore, are becoming of mounting importance to the non-farmer as well as the farmer.

Prices received by farmers reached an average of parity in September 1941 for the first time since 1920 as judged by the ratio of the

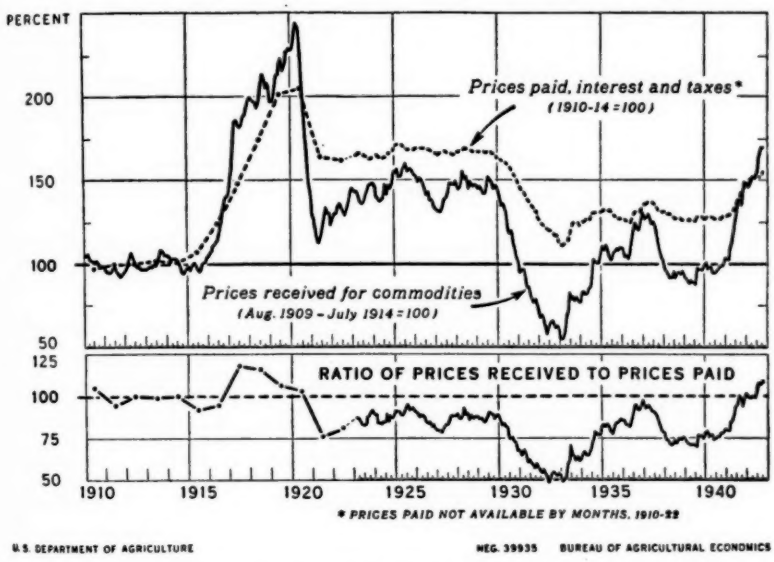

FIG. 1. RELATIONSHIP BETWEEN INDEX OF PRICES RECEIVED AND PRICES PAID BY FARMERS

index of prices received to the prices index of paid interest and taxes. This does not mean that all commodities had reached parity but that they did average parity with some below and others above. Figure 1 shows the comparison from 1910 to date.

The use of an index of prices paid by farmers for computing parity has been criticized on the grounds that it creates a spiral. It has been said that the higher the prices received by farmers for their products, the higher the prices they pay for products used in living and production; this in turn causes parity to go higher; then, the higher parity becomes, the more the farmers receive for their prod-

ucts, and so on ad infinitum. While a trace of circular reasoning may be involved in the parity concept, it should be kept in mind that it is not the same farmer that does all this, but it happens only within the group of farmers and only for certain agricultural products. An increase in prices received does not necessarily mean the same proportionate increase in prices paid unless processing and handling charges have also increased proportionately. The North Dakota wheat farmer does not produce cotton nor the Louisiana

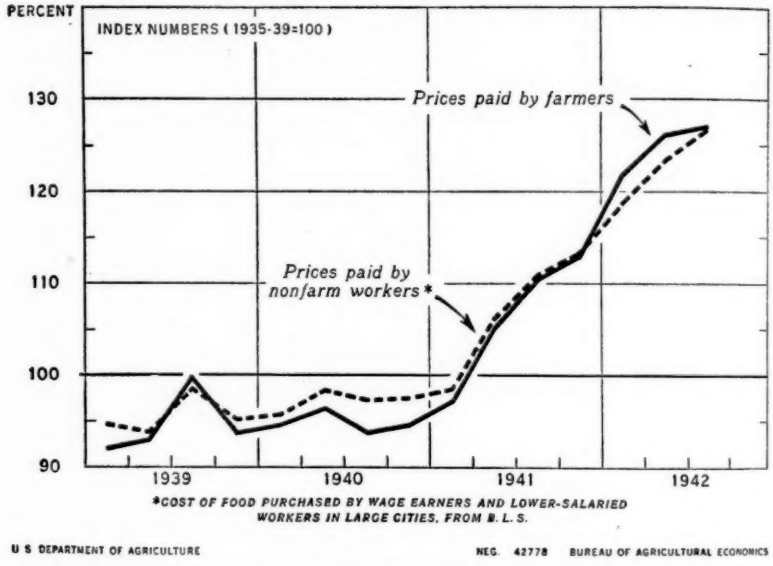

FIG. 2. INDEX NUMBERS OF PRICES PAID BY FARMERS FOR FOOD (B.A.E.) AND COST OF FOOD PURCHASED BY WAGE EARNERS AND LOWER-SALARIED WORKERS IN LARGE CITIES (B.L.S.)

farmer, wheat. In the case of feed grains like corn it should be pointed out that the amount produced and fed on the farm where produced does not enter into the weights used in the index, but only that proportion that is bought by farmers. To the farmer in Louisiana buying flour, it is immaterial whether wheat was produced on a farm or in a factory—he still has to pay a certain price to obtain the flour. Of the commodities used for living, only 66.3 percent of the weight is given to the total of the two groups (food and clothing) at which this criticism can be leveled with any degree of realism. Of the commodities used in production, feed, comprising 27.0 percent

of the weight, and seed, comprising 3.6 percent of the weight, are the only groups (with the possible exception of a small portion of the fertilizer group which has a total weight of only 8.6 percent) at which this same criticism can be leveled. The rest of the weights used in the two groups are composed almost wholly of nonagricultural commodities. On the other hand, the same type of argument can be used in criticizing the adjustment of urban wage rates according to the rise in cost of living. Here again the rise in wage rates

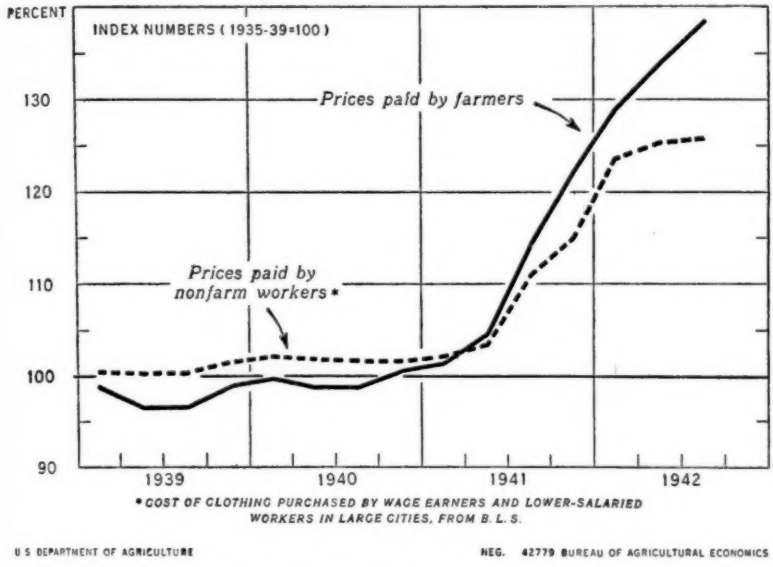

FIG. 3. INDEX NUMBERS OF PRICES PAID BY FARMERS FOR CLOTHING (B.A.E.) AND COST OF CLOTHING PURCHASED BY WAGE EARNERS AND LOWER-SALARIED WORKERS IN LARGE CITIES (B.L.S.)

is reflected in increased cost of products produced by labor, then in increased cost of things the laborer buys, etc., etc.

It is of interest to compare the changes shown by the index for the food and clothing components of the prices paid by farmers index, representing rural areas with the same components of the Cost of Living Index of the Bureau of Labor Statistics representing large cities. In Figure 2 is shown the comparison of the two series for food for recent years, both on a 1935–39 base. Figure 3 shows the same comparison for clothing. While the two series for food have followed in reasonably close agreement, the two for clothing show fairly

wide divergence especially since June, 1939. The prices paid by farmers index rose 42 points from June, 1939 through September 1942, while the BLS cost of living clothing index rose only 25.5 points in the same period. As a result of different methods used in the collection of data and construction of these two indexes, differences are to be expected, and an understanding of these is necessary before any comparison between the two is made. While the points of difference discussed below are pertinent to both food and clothing, certain of these obviously are more applicable to clothing than food.

The most important difference is the weights applied to the different regions. Both sets of weights are estimates of the quantities of each item purchased, based on the factors of population and average purchases for the items in the index. The Bureau of Labor Statistics uses the population of cities above a certain size for its population factor, whereas the farm population is used by the Bureau of Agricultural Economics. These regional weights, therefore, vary considerably between the two indexes depending on the ratio of farm population to total population. For instance, the East South Central region has a weight of 2.4 percent in the BLS index and about 15 percent in the prices paid by farmers index for clothing. Since prices, paid data collected by the Bureau of Agricultural Economics shows that the greatest increases have occurred in this region in the prices of clothing bought by farmers, these increases would have a greater effect on the BAE index with the higher weight than on the BLS index, even if the BLS data showed the same increase as did the BAE. On the other hand, in New England, the BLS index has a weight of 10.3 percent against a weight of only 2 percent for the BAE index. Increases in the New England group of States have generally been less than in other regions for the items used in the prices paid index of the BAE. Since slightly different methods of weighting are used in the two indexes these comparisons are not entirely accurate, but do show the approximate differences. While the Bureau of Labor Statistics computes the clothing index by cities and weights the city indexes to obtain a United States index, the Bureau of Agricultural Economics weights the regional prices to obtain United States prices and then computes the index. The weights quoted as used by the BLS are those used in combining the city indexes. Those quoted for the Bureau of Agricultural Economics index have been derived for each region by combining

the regional weights for each item into a composite weight for the region by use of the same weights used in obtaining the U. S. aggregates for clothing.

A further basic difference between the indexes is in the type of index. The index of prices paid by farmers as the name implies, is an index of price changes. This makes desirable the use of fixed weights. The BLS index on the other hand is a cost of living index using changing weights. Ordinarily these weights are held constant over long periods of time but, at present, the BLS is making frequent changes. The case of silk hosiery will illustrate this point. In September, 1942 the Bureau of Labor Statistics reduced the weight given to silk stockings by two-thirds because stockings of their specifications were not readily available at all places. At the same time they linked rayon stockings and cotton socks into the index. On the other hand, the Bureau of Agricultural Economics continued to receive reports on prices of silk hosiery as before and weighted them into the index as formerly. Series of prices of silk and rayon mixture and cotton hose are available to link into the index when retail merchants report that hose passing as silk hose are no longer being sold to farm families. Furthermore, this linking is likely being automatically accounted for as dealers come to report more and more of the readily acceptable substitutes under the silk hose question.

Another factor helping to account for the difference since March 1942 between the two series is the matter of price ceilings. Merchants in the larger cities no doubt had better records of their historic prices on which to base ceiling prices and they were also more quickly educated to requirements of the Maximum Price Regulation and other specific regulations. However, retail merchants in the smaller towns generally kept no exact records of their historic prices on which to base their ceiling prices. It is conceivable even at this date that some retail merchants in smaller towns are selling articles above the ceiling price. This will probably become of decreasing importance in the near future.

A still further factor to be taken into consideration is the fact that farmers' incomes are now higher and they are willing to pay a higher price for a certain article of clothing than formerly. If a retailer of necessity has had to drop a popular low-priced item from his stock because of small margins, the farmer is probably able and willing to pay a slightly higher price for a different line of the same

item than formerly. Whereas dollar shirts were commonly stocked previously, many stores have newly labeled stock on their shelves and now start their prices at $1.50 on this item.

The index of prices paid by farmers for commodities used in living and production is not a perfect instrument for measuring changes in the price level under wartime conditions because certain commodities, formerly bought, are not now available. With so much dependent on the level of the index it would be unwise to make any changes until these are clearly understood and supported by an adequate factual background.

It would be desirable that research be undertaken to study the effects of different methods of handling rationed commodities as well as those becoming increasingly scarce. The extent of the changes in farm purchases imposed by war conditions would also have to be studied. It must be realized that whatever changes would be indicated from studies of this kind would have to be very carefully explained to meet criticism by certain groups affected by the direction of change in the index and the consequent level of parity prices.

With gas rationing now nation-wide, it is likely that an increasing part of the farmers' purchases will be made from mail-order firms. Prices paid by farmers in chain and mail-order firms should be averaged in with the prices paid in independent stores in the determination of national averages. Chain store prices at the present time are used to help estimate the monthly price changes between quarters but are not weighted in with the quarterly independent store prices for use in the index. Any change involving the inclusion of such prices could only be made after a study of considerable magnitude. There would be involved not only the series of price quotations but also the determination of weights. The combination of price quotations from the several outlets would require the determination of the percentage of farm families' purchases which are made from each type of outlet under present conditions. Under existing conditions, it is doubtful that any such comprehensive study can be undertaken. It is unlikely, therefore, that any significant change can be made in the index of prices paid in the near future.

MINUTES OF THE MEETING OF THE EXECUTIVE COMMITTEE AMERICAN FARM ECONOMIC ASSOCIATION

LaSalle Hotel
Chicago, Illinois
January 9, 1943

Members present:

G. S. Wehrwein, Presiding
F. F. Elliott
E. B. Hill
Asher Hobson
S. E. Johnson, President-elect
H. B. Price
M. R. Benedict and R. R. Renne were unable to attend.

Report of the Election Tellers

We, the undersigned election tellers, advise that we have tabulated the ballots cast for the election of the Association's officers for the year 1943. The results are as follows:

President	Sherman E. Johnson
Vice-President	Harry R. Wellman
Vice-President	Conrad Hammar
Sec'y-Treasurer	Asher Hobson

Respectfully submitted,
(Signed) JOSEPH ACKERMAN
EDWARD A. DUDDY
HENRY C. TAYLOR

President's Report

It was with much reluctance that I personally agreed to the cancellation of the annual meeting of our Association. The annual meeting is the only opportunity for personal contacts of our membership. With the JOURNAL OF FARM ECONOMICS it is the chief unifying influence we have. I also feel that our program this year was geared to the wartime efforts of the nation as a whole.

However, transportation difficulties and the burdens of the war on our members, financially and professionally, were such that cancellation was the logical thing to do. In view of the fact that no meeting was held I deem it desirable to report in some detail the history of the year's effort on part of the president, the program committee and the executive committee.

Program making was under way by July when word came from the Office of Defense Transportation that they looked with favor on the cancellation of conventions during the Christmas holidays because of impending traffic difficulties. Several of the associations took steps to cancel their meetings and our executive committee agreed to do the same. By July 15, however, the officials of several of the Associations conferred with representatives of the Office of Defense Transportation and stressed the importance of the meetings of the economic and sociological groups in the war effort: as a result of this conference and of further correspondence the former action was rescinded. However, to avoid week-end travel all the Associations agreed to hold their meetings from Tuesday through Thursday, December 29–31, 1942. This action was reported to our membership in the JOURNAL OF FARM ECONOMICS of August, 1942.

Correspondence with heads of departments of agricultural economics and others and personal conferences, however, made it clear that the membership was not enthusiastic about holding the annual meeting. This was emphasized when many, especially those living long distances from Cleveland, refused to accept places on the program, saying they were not planning to attend the meeting. This in itself tended to restrict participation on the program geographically. It was also evident that we could expect a small attendance. With this in mind the program was curtailed. In three cases, only one session was scheduled at a given period, partly because of the general interest in the subject of the session, partly because the program committee did not feel it wise to divide the attendance. In one case two sessions were scheduled for the same period and in another case three. Round tables were reduced to two the first evening and three on December 30. The relationship and responsibility of agricultural economists to the war effort or post-war problems were stressed in practically every session and in other cases indirectly.

Past presidents and others have called attention to the lack of time for discussion especially at the general sessions. For this reason only two papers were scheduled for all of the main sessions. The program was also planned to give groups with special interests full opportunity to discuss a given topic in their own way. This accounts for the arrangement of most of the round tables and one of the general sessions.

Correspondence with the membership indicated that while the round table offered opportunity for informal discussion and airing

of views, the feeling was general that for the main sessions people came to hear some one who could speak with authority on the subject assigned and who would present his views in a well thought-out paper. Many were in favor of giving the younger men a chance provided "they had something to say." One of the difficulties of a program committee is to know what young men can meet this qualification. Publication in the JOURNAL is one of the ways in which our younger men can make themselves known and should be encouraged.

The opinion was general among the members that papers have tended to become too long and that discussants likewise should confine their remarks within definite limits of time. With this in mind every participant was warned not to have a paper which would take more than 30 to 35 minutes to read and discussants' remarks were not to exceed 10 minutes. This is also desirable from the standpoint of the editor of the JOURNAL. A circular letter was prepared to be sent to every member on the program, including the chairman of each session, urging them to adhere to these suggestions. Some exceptions had to be made in the case of some of the round tables and sessions. However, this letter was made unnecessary by the final cancellation of the meetings.

A tentative program was printed in the November issue of the JOURNAL and it was planned to send out the complete program with the ballots. On November 13 word came from Dr. E. G. Nourse president of the American Economic Association that the Office of Defense Transportation was again discouraging the holding of meetings during the Christmas holidays. Several of the Associations immediately took action and our executive committee agreed to cancel our meeting, provided the other associations did likewise. On November 27 word came from Dr. Nourse that all Associations had agreed to cancel their meetings at Cleveland.

Program making was suspended after November 13 with a few gaps still to be filled. Participants on the program were notified around December 1 of the action taken by the Associations. The executive committee agreed that all those on the program should be urged to prepare their papers as usual and send them to the editor of the JOURNAL and to the discussants by January 1, 1943; the discussants were urged to send their remarks to the editor by January 10. Everyone was asked to put forth unusual effort to do this because now they no longer were under pressure to meet a dead line and were without the stimulation of reading the paper before

their colleagues. The final program is being printed in this issue of the JOURNAL.

Since the constitution provides for a one year term for the officers the election was held as usual. However, 1943 will be like 1942, unless the war comes to an end suddenly, and it may not be desirable to hold a meeting in 1943. In case this is determined early in the year before program making starts the best plan would be to have the present officers hold over. This, however, is not contemplated in the constitution and the membership should be canvassed as to the course of action the executive committee and officers should take.

We have now been electing officers under the present plan for 10 years. In view of the fact that other Associations have abandoned the competitive election and we ourselves have discovered that it has undesirable features, I would like to recommend that a special committee be appointed to reexamine election procedure and make recommendations to the membership.

I personally feel that there is a place for more consideration of the teaching and extension aspects of our profession. For instance, I am sure that there is widespread dissatisfaction with the foreign language requirements for the Doctor's degree and especially with the way they are administered. Members of other associations feel the same way. The executive committee felt, however, that this time was inopportune for the consideration of this subject. Nevertheless, I would like to see the subject attacked critically and frankly, jointly with other associations as soon as practicable.

Finally, I want to thank the officers and members of committees for their whole-hearted cooperation in this difficult year. Special acknowledgment is due to the vice-presidents as members of the program committee for their help with the program. This applies also to other members of the Association who took responsibility for certain sessions. I also want to thank all who accepted assignments on the program; many of the papers had to be prepared by people very busy with their own work.

GEORGE S. WEHRWEIN, *President*

Received by the Executive Committee and recommended for publication in the JOURNAL.

Report Of The Secretary-Treasurer For The Fiscal Year Ending November 30, 1942

Membership. Our Association is not immune to the effects of the war. Individual members are shifting in increasing numbers both as

to location and in regard to their immediate interests. It has become extremely difficult, if not impossible, to maintain membership numbers during this period of drastic readjustments. The Association's membership has dropped from 1255 to 1027 during the year—a loss of 228.

The foreign membership has been declining steadily since the outbreak of the war. It was 169 in 1939. It is now 59. But 1942 is the first year the Association has experienced a serious decline in its members living in the United States. The decrease was 210.

The Secretary-Treasurer wrote to those whose membership had lapsed during the past year with a view to ascertaining the cause. The request for a reply was worded as follows.

"I am writing you as one of those who discontinued his membership in the Association during 1942. The other officers and myself are extremely interested in knowing the reason. This information may prove helpful in improving the organization by modifying its activities to meet more completely the need of its members. Won't you write me?"

Necessity for reducing expenses was given by those replying as the outstanding reason for discontinuing membership. Indications are that membership numbers will continue to decline during the war.

The following table contains a comparison of membership numbers, classified by groups for the past four years.

	1939	*1940*	*1941*	*1942*	*Comparison 1941 & 1942*
Individuals, U. S.	829	845	879	674	−205
Junior Members				41	+ 41
Foreign Individuals	60	53	40	33	− 7
U. S. Libraries and Firms	214	209	207	202	− 5
Foreign Libraries and Firms	166	141	129	77	− 52
Totals	1,269	1,248	1,255	1,027	−228

The above figures do not include 35 subscriptions to the 1942 volume of the JOURNAL by the American Library Association. These Journals are destined for foreign libraries after the war.

Last year the Executive Committee established on an experimental basis, a Junior membership for students at reduced rates. Forty-one accepted this offer. With the decline in graduate school enrollment, Junior memberships are likely to diminish, if not disappear entirely during 1943.

The Journal. Printing costs have increased. A comparative analysis for the past three years is given in the table below.

	*Journal Cost**	*Journal*	*Reprints*	*Pages*	*Back Nos. Bought*	*Back Nos. Sold*
1940	$3,710.43	$3,200.49	$509.94	920	$94.00	$173.35
1941	3,657.72	3,209.06	448.66	890	15.00	260.32
1942	4,102.29	3,602.89	499.70	1,028	49.00	302.24

* Total Journal and reprint cost.

Finances. The Association ended the year with a balance of $2,819.13. This amount represents the excess of receipts over operating expenses. This was $576.75 less than last year. Operating income decreased $275.51; operating expenses increased $365.76 as compared to a year ago. Non-operating income increased by $64.52. The operating statement for 1942 as compared to 1941, follows:

OPERATING STATEMENT
THE AMERICAN FARM ECONOMIC ASSOCIATION
Year Ending November 30, 1942

			1942	*1941*
Operating Income				
Receipts from Dues		$ 5,464.26		
Back Numbers Sold		302.24		
Reprints Sold		228.53		
Advertising Sold		100.00		
			$ 6,095.03	$ 6,370.54
Operating Expense				
JOURNAL OF FARM ECONOMICS				
Vol. XXIV, 4 issues	$3,602.59			
Vol. XXIV, 4 reprints	499.70			
Annual Meeting Expense				
Annual Meeting, 1941	378.76			
Annual Meeting, 1942	5.77			
Ballot Envelopes	4.50			
		$ 4,491.32		
Back Numbers Purchased	49.00			
Postage	190.13			
Office Supplies	37.00			
Editorial Assistance	19.53			
Miscellaneous	33.70			
		329.36		
			$ 4,820.68	$ 4,454.92
Excess, Receipts above Operating Expense			$ 1,274.35	$ 1,915.62
Plus Non-operating Income		$ 1,482.34		
Divends & Int., Stocks & Bonds				
Interest, Savings Account		62.44		
			$ 1,544.78	$ 1,480.26
			$ 2,819.13	$ 3,395.88

FINANCIAL STATEMENT
THE AMERICAN FARM ECONOMIC ASSOCIATION
December 1, 1942

Assets			
Cash, Bank Balance	$ 275.13		
Stocks and Bonds, Market Value*	27,926.88		
Savings Account	123.62		
		$28,325.63	$25,599.97
Proprietary Interest			
Net Worth, December 1, 1941	$25,599.97		
Plus Net Returns for year			
Operating	1,274.35		
Non-Operating	1,544.78		
	$28,419.10		
Depreciation (Market Value Stocks & Bonds on Hand 11/30/42)	93.47		
		$28,325.63	$25,599.97

* Nov. 30, 1942.

The Association's net worth at the close of the fiscal year was $28,325.63.

A detailed report on the Association's security holdings has been made by the Investment Policy Committee to the Executive Committee. The Association's assets at the close of the fiscal year were:

Stocks, Market Value	$21, 901.25
Bonds " "	6, 025.63
Cash	398.75
	$28, 325.63

The stocks, which represent the largest proportion of the investments showed a return, based on cost, of 5.19 percent.

Nineteen Forty-Three? Membership numbers are likely to decline. Operating costs are likely to increase. It is quite within the realm of probability that next year's income will not cover the present level of operating expenditures. Fortunately, the Association's financial situation permits it to operate at a loss. In times such as these it is justified in doing so.

The Association can be of great usefulness during the war emergency. Agricultural economists are devoting ever-increasing attention to problems involved in the adaptation of agriculture to meet war needs. THE JOURNAL OF FARM ECONOMICS reflects this shift of emphasis. It is strongly recommended that the JOURNAL be maintained at its present level with respect to both size and vigor.

Respectfully submitted,
(Signed) ASHER HOBSON *Secretary-Treasurer*

Received by the Executive Committee and recommended for publication in the JOURNAL.

Report of the Auditor

In accordance with your request I have examined the accounts of the Secretary-Treasurer of the American Farm Economic Association for the year ending November 30, 1942. I certify that all the entries were checked against supporting vouchers and found to be in agreement. The assets of the Association were confirmed by examination of bank statements and by checking securities owned by the Association.

I certify that the financial statement of the Secretary-Treasurer reflects accurately the transactions and financial situation of this Association. The excellent condition of records and accounts reflects credit to those in charge of this work. The Association is indebted to the Secretary-Treasurer and his efficient assistants for this service.

Respectfully submitted,
(Signed) GLADWIN E. YOUNG *Auditor*

Received by the Executive Committee and recommended for publication in the JOURNAL.

Report of the Editor

Volume XXIV of the JOURNAL contained 970 pages of printed materials. Approximately 77 percent of the space was devoted to articles and discussions, 7 percent to notes, 9 percent to book reviews, and 3 percent to news items. An honor roll of agricultural economists who were in the armed services of the United States was a new feature. The names of 152 agricultural economists were reported for the roll.

Several problems were created by the war in the printing and preparation of the JOURNAL. Costs of publication rose moderately. There was some delay in printing as a result of the needs of government for printed materials in the war effort. The distribution and editing was generally retarded by the slowing down of the mail service. The number of contributions was at first substantially reduced by the impact of war. Fortunately, this was a temporary reaction since the volume of materials received for publication increased to the former level toward the end of the year. These developments did not seriously interfere with the management of the

JOURNAL although they may indicate important changes in policy for the future.

The editor acknowledges the splendid cooperation of contributors, the Editorial Council, and the Editorial Staff. Members of the Council were very helpful in deciding upon editorial policy and also in appraising materials submitted for publication. Especially do I wish to acknowledge the assistance of David L. MacFarlane and Bennett S. White, Jr., for their contributions to handling the details of editorial assistance.

The coming year holds many uncertainties for the Editorial Staff. The trend toward higher costs of publishing and the decline in membership (and income) will likely continue. Rationing of book paper is a possibility. Annual meetings are probably out for the duration of the national emergency. These and other unforseen developments will create many problems which may call for substantial changes in policy, both financial and editorial, if the JOURNAL is to retain the standards of size, quality and service that have been maintained in past years.

(Signed) H. B. PRICE, *Editor*

Received by the Executive Committee and recommended for publication in the JOURNAL.

PRINTED MATERIALS IN JOURNAL OF FARM ECONOMICS*
VOLUME XXIV, 1942 (PAGES)

Issue	Table contents	Articles including discussion	Notes	Reviews	News items	Exchange adv.	Paid adv.	Memorial	Index	Total
February	2	353	—	12	—	6	1	—	—	374
May	—	149	12	18	7	6	3	1	—	196
August	—	108	39	29	9	6	1	—	—	192
November	—	140	13	25	14	3	2	—	6	203
Total	2	750	64	84	30	21	7	1	6	965
Per cent	.2	77.8	6.6	8.7	3.1	2.2	.7	.1	.6	

* Does not include covers except when used for paid advertising.

The Executive Committee recommends that the Editor of the JOURNAL OF FARM ECONOMICS continue to exert every effort to maintain the JOURNAL on its present high level, both as to quality and volume. Since circumstances may prevent for some time to come the holding of the annual meetings, the JOURNAL becomes of

increasing importance as a connecting link betewen the members and their association.

In view of the probability of decreased income and increasing costs, the Association may face a period during which current receipts will not cover expenses. Fortunately, the past policy of building a healthy reserve permits the Association to carry on with undiminished financial vigor.

Report of the Committee on the Land Market

The Committee held no meetings during the year but carried on considerable work by correspondence.

As a result of preliminary studies of the land market, the Committee arranged for a general session program at the Annual Meeting of the American Society of Farm Managers and Rural Appraisers. This meeting took the form of a panel discussion. The following persons participated: Joseph Ackerman, E. C. Johnson, W. G. Murray, George Pond, George Walter, Ersel Walley, and E. C. Young. The meeting was attended by about two hundred persons and extended over a period of almost three hours. The principal topics discussed were: (1) History of the land market during World Wars I and II, and (2) Proposals for the control of the land market.

A summary of this round table will be published in the Journal of the American Society of Farm Managers and Rural Appraisers.

The Committee also arranged for a round table for the Annual Meeting of the American Farm Economic Association. Papers were prepared by W. G. Murray and Mark Regan. These papers are recommended for publication in the JOURNAL.

We recommend that the Committee on the Land Market be continued in 1943.

(Signed) E. C. YOUNG, *Chairman*
JOSEPH ACKERMAN
E. C. JOHNSON
W. G. MURRAY
MARK REGAN
ROGER C. WILKINS
ERSEL WALLEY

Received by the Executive Committee and recommended for publication in the JOURNAL.

A report of progress was received from the Committee on Medals and Awards. It was recommended that the Committee be continued.

H. B. Price was appointed editor of the JOURNAL OF FARM ECONOMICS for the year 1943.

The National Bureau of Economic Research invited the American Farm Economic Association to nominate a representative to serve as a member of the Bureau's Board of Directors. W. I. Myers was nominated by the Executive Committee to represent the Association in this capacity for the five-year term expiring with the annual meeting of 1948.

In order to furnish transfer officers of corporations with the necessary evidence that the Secretary-Treasurer is authorized to transfer securities in the name of the Association, the following resolution was adopted.

"RESOLVED, that the Secretary-Treasurer who is also Chairman of the Investment Policy Committee, be and is hereby authorized and empowered, for, and in the name and on behalf of this Association to take any and all such steps, and to do any and all such things, as may be necessary, required, and appropriate for, or in connection with, the purchase, acquisition, acceptance, handling, pledging, sale, or other disposition of stocks, bonds, and other securities belonging to the Association or pertaining to its business, including the execution, and delivery for and in the name and on behalf of the Association, of any and all endorsements, transfer and assignments of certificates of stock, bonds, or other securities standing in the name of this Association, either for the purpose of sale or transfer, and all such other steps and action as may be necessary or proper in connection herewith."

In order to transact the necessary business of the Association in the absence of the usual business meeting held in connection with the annual meeting, the Executive Committee authorized the Secretary to defray in the name of the Association, travel and subsistence expenses, not otherwise covered, of members attending the Executive Committee meeting in Chicago, January 9, 1943.

This action is to be submitted for approval at the next business meeting of the Association.

PROGRAM OF THIRTY-THIRD ANNUAL MEETING THE AMERICAN FARM ECONOMIC ASSOCIATION

December 29 10:00 A.M. *Price Policy and Price Control*

Chairman— . . .

John D. Black, Harvard University
"Agriculture Under the New Price Controls"

A. C. Hoffman, Office of Price Administration, Washington, D. C.
"Food Price Control Policy and Mechanics"

Discussants—Holbrook Working, Stanford University and Geoffrey S. Shepherd, Iowa State College

2:00 P.M. *Reorientation of Agricultural Economics Theory*

Chairman—H. R. Tolley, Bureau of Agricultural Economics

Theodore W. Schultz, Iowa State College
"Redirecting Our Farm Policy"

Conrad Hammar, University of Missouri
"Agriculture in an Expansionist Economy"

2:00 P.M. *1943 Production Goals*

Chairman—W. I. Myers, Cornell University

Sherman Johnson and Neil Johnson, Bureau of Agricultural Economics
"Resources Available for Agricultural Production in 1943"

J. Joe Reed, Bureau of Agricultural Economics
"Techniques for Achieving the Agricultural Goals for 1943"

Discussants—L. J. Norton, University of Illinois
G. W. Hedlund, Pennsylvania State College

4:30 P.M. Meeting of the Executive Committee

December 29 8:00 P.M. Round Table I. *Farm Management and Production Goals*

On What Farms Should Our Limited Resources Be Used in the Attempt to Maintain Our Agricultural Production?

Chairman—E. B. Hill, Michigan State College

Stanley W. Warren and Lowell S. Hardin, Cornell University
"Where Can We Best Increase Our Food Production?"

Phil G. Beck, Farm Security Administration, Indianapolis

"Contribution of the Farm Security Administration Clients to Agricultural Production Goals"—Special emphasis on North Central States

R. G. Saville, Farm Security Administration, Cincinnati

"Contribution of the Farm Security Administration Clients to Agricultural Production Goals"—Special emphasis on Southern States

Clyde O. May, Michigan State College

"The Influence of Managerial Ability and Size of Farm on the Efficiency of Agricultural Production"

8:00 P.M. Round Table III. *Land Tenure*

Chairman—Marshall Harris, Bureau of Agricultural Economics

Ramon Fernandez, School of Economics, National University of Mexico

"Land Tenure Problems and Programs in Mexico and Central America"

C. O. Brannen, University of Arkansas

"Current Trends in Tenure Relations to Meet Wartime Conditions in the Cotton Belt"

Rainer Schickele, Iowa State College

"Current Trends in Tenure Relations to Meet Wartime Conditions in the Corn Belt"

H. C. Hoffsommer, University of Louisiana

"Southwestern Land Tenure Research Project"

H. C. M. Case, University of Illinois

"Work and Plans of the North Central Regional Land Tenure Committee"

December 30 9:00 A.M. *Business Meetings*

10:30 A.M. *Land Economics*

Chairman—R. R. Renne, Montana State College

John H. Bennett, Secretary to the Land Committee, National Resources Planning Board

"A Desirable Wartime Land Policy"

G. H. Craig, Montana State College

"Effects of War Developments upon Land Utilization with Special Emphasis on the Western States"

Discussants—Virgil Hurlburt, Bureau of Agricultural Economics
Rainer Schickele, Iowa State College
F. F. Hill, Cornell University

10:30 A.M. *How Can Farm Management Best Serve in Meeting Production Goals*

Chairman—W. D. Nicholls, University of Kentucky
E. C. Young, Purdue University, and G. W. Forster, University of North Carolina
"Suggestions for Research"
M. L. Mosher, University of Illinois, and V. B. Hart, Cornell University
"Suggestions for Extension"

10:30 A.M. *Marketing and Distribution*

Chairman—C. G. McBride, Ohio State University
F. L. Thomsen, Bureau of Agricultural Economics
"The Effect of War Conditions on the Marketing of Farm Products"
Discussants—Carl M. Clark, University of Kentucky
J. M. Tinley, University of California
Donald Hammerberg, Milk Administrator, State of Connecticut
"Wartime Problems in the Transportation of Farm Commodities"
Discussants—Clifford M. Hardin, University of Wisconsin
Frank Robotka, Iowa State College

December 30 12:30 P.M.—LUNCHEON—

American Farm Economic Association
Rural Sociological Society
American Association for Labor Legislation
Chairman—C. E. Lively, University of Missouri, President of the Rural Sociological Society
H. Clarence Nixon, Vanderbilt University
"What Shall Be the Legal Status of the Permanent Agricultural Laboring Class in the United States?"
Discussants—William T. Ham, Bureau of Agricultural Economics
Conrad Taeuber, Bureau of Agricultural Economics
(A third discussant to be named by the American Association for Labor Legislation)

2:30 P.M. *JOINT MEETING WITH THE AMERICAN ECONOMIC ASSOCIATION*

Organized Labor and the Farmer

Chairman—Sumner Slichter, Harvard University
Kenneth Parsons, University of Wisconsin
"The Basis for the Growing Tension between Agriculture and Labor"
Discussant—Edwin Witte, University of Wisconsin
Lloyd Reynolds, Johns Hopkins University
"Farm Price—Industrial Wage Parity"
Discussant—John D. Black, Harvard University

5:00 P.M. *Meeting of the Editorial Committee*

8:00 P.M. Round Table I. *Farm Labor and Agricultural Production*

Chairman—J. I. Falconer, Ohio State University
Paul E. Johnston, University of Illinois and W. M. Curtiss, Cornell University
"The Current and Prospective Farm Labor Situation and Its Effect on Agricultural Production"
J. Coke, Department of Agriculture, Ottawa, Canada
"The Farm Labor Situation in Canada"
F. L. Morrison, Ohio State University, E. J. Nesius, University of Kentucky, and Don Kaldor, Iowa State College
"Ways in Which Farmers are Meeting the Scarcity of Labor"

8:00 P.M. Round Table II. *The Land Market Under the Impact of the War*

Chairman—E. C. Young, Purdue University
Mark Regan, Bureau of Agricultural Economics
"Recent Developments in the Farm Real Estate Market"
Discussant—Joseph Ackerman, Farm Foundation
W. G. Murray, Iowa State College
"Land Value Controls"
Discussants—E. C. Johnson, Farm Credit Administration
Ersel Walley, Walley Agricultural Service

8:00 P.M. Round Table III. *Agricultural Statistics in Wartime*

Chairman—Walter Ebling, Federal-State Crop Reporting Service for Wisconsin
Eric Englund, Bureau of Agricultural Economics
"The Role of Statistics in Agricultural Policy"
Discussant—T. W. Schultz, Iowa State College
George Harrell, Bureau of Agricultural Economics
"Prices Paid by Farmers and their Role in Agricultural Price Control"
Discussant—Don Anderson, University of Wisconsin

December 31 10:00 A.M. *Post-War Planning*

Chairman—F. F. Hill, Cornell University
F. F. Elliott, Bureau of Agricultural Economics
"Agriculture When the War Ends"
Discussant—M. R. Benedict, University of California
J. E. Lattimer, Macdonald College, Quebec
"Prospective Trends in Canadian Agriculture"
Discussant—H. S. Patton, Michigan State College

12:30 P.M. *ANNUAL DINNER*

Chairman—George S. Wehrwein, University of Wisconsin
Speaker—George Soule, Editorial Staff of the *New Republic*
"The Freedom from Want after Victory"